

SYLLABUS

IS410E_0101_26

Information Systems and AI for Business

ACADEMIC AREA :	OPERATIONS AND ANALYTICS
PROGRAMME :	PGE / UGTC LEVEL 4 PGE
PERIOD :	SPRING
COORDINATOR :	Mr. Lakshmi Narasimha Raju VUDDARAJU
INSTRUCTOR(S) :	Mr. Lakshmi Narasimha Raju VUDDARAJU
CONTACT HOURS :	24.0 hours
STUDY TIME :	60 hours hours (Class preparation, homework and assessments)
CREDITS :	4.0 ECTS
AOL :	YES

PRE-REQUISITE MODULES :

None

MODULE DESCRIPTION :

Information Systems and AI for Business explores how digital technologies, data, and AI shape today's organizations and their strategies, with a strong focus on real-world cases, ethical questions, and practical managerial decisions.

CONTRIBUTION TO PROGRAMME LEARNING OBJECTIVES :

- Demonstrate advanced technological literacy to Connect physical and digital spaces #ConnectSpaces

MODULE INTENDED LEARNING OUTCOMES (ILOs) :

1. Explain and evaluate the role of information systems and IT management in modern organizations.
2. Able to apply key concepts, tools and techniques from information systems and digital strategy.
3. Analyze the digital transformation initiatives by considering technological choices, organizational and governance risks and ethical implications.
4. Identify and analyze emerging digital trends and evaluate their implications for work and organizations.

TOPICS COVERED :

1) Fundamentals of IT management. State of IT, IT-business strategic alignment and Digital transformation. 2) Managing IT initiatives, Managing digital transformation, Internet and world wide web technologies and Implementation of key enterprise systems. 3) Digital innovation and future trends in IT, Transformation of industries and society and Emerging trends in IT.

RESEARCH-LED TEACHING :

It involves integrating current research, industry trends, and emerging technologies into the curriculum to enhance students' understanding and critical thinking. Here are some ideas for research-led teaching approaches for this module:

Case Studies and Current Industry Examples: Use real-world case studies and examples to illustrate the application of information and digital technology management concepts. Encourage students to analyze and discuss these cases, drawing upon current research, industry reports, and scholarly articles to support their analysis. Explore how the latest research findings can inform decision-making in similar situations.

Emerging Technology Presentations: Assign students to research and deliver presentations on emerging technologies relevant to information and digital technology management. Examples may include blockchain, artificial intelligence (AI), Internet of Things (IoT), cybersecurity, and cloud computing. Encourage students to explore the latest research findings, industry applications, and potential implications for organizations.

Industry Research Projects: Engage students in research projects focused on specific areas of information and digital technology management. Encourage them to explore current industry challenges, investigate best practices, and propose innovative solutions based on rigorous research methods. This can involve interviews with industry professionals, analysis of industry reports, and benchmarking studies.

CSR AND SUSTAINABLE DEVELOPMENT GOALS :

As an innovation IT are changing the way we live, the way we learn, the way we work: new way to do banking, commerce, business, work ... It is a revolution.

Since Technology exists it is a wonderful tool to enhance and understand , to facilitate social links between members of groups.

IT reduces the impact pollution of traditional production tools by automating and rationalising the work.

Digital transformation for example reduces the use of paper, of vehicles, offices... It allows also the e-work and e-learning.

IT reduces and help in controlling the CO2 production.

CSR NB HOURS :

3

SUSTAINABLE DEVELOPMENT GOALS COVERED :

- 09 - Industry, innovation and infrastructure
- 11 - Sustainable cities and communities
- 12 - Responsible consumption and production

TEACHING METHODS :

The module will employ a dynamic teaching approach that combines traditional lecturing with engaging case discussions. Throughout the course, we will delve into world-class business cases, providing students with real-life examples of how organizations have successfully addressed their challenges.

METHODS OF ASSESSMENT :

Continuous/Final	Group/Individual	Assessment	Weight	Duration	ILOs assessed
Continuous	Group	Multimedia production	40%		All
Final	Individual	Final written exam	60%	3 Heures	All

Assessment 1 details:

The group project in this module emphasizes the importance of delivering a high-quality and impactful presentation. The objective is for students to develop a real-world project focusing on digital innovation/transformation and current/future trends in IT within companies or industries.

ACADEMIC INTEGRITY :

Academic misconduct encompasses various behaviors or actions that violate the principles of academic integrity, fairness, and honesty, thereby undermining the credibility of academic work, assessments, or research. Examples of academic misconduct include:

- Cheating
- Plagiarism
- Fabrication
- Gaining an unfair advantage
- Assisting others in committing academic misconduct, such as by utilizing generative AI
- Falsification of records or official documents
- Unauthorized access to restricted information or data
- Unauthorized or unethical use of generative AIS

Academic misconduct is a serious offense and can result in consequences such as module failure, research project failure, or even expulsion from the school. To prevent unintentional academic misconduct, it is essential to consult with your instructor to understand the specific rules and instructions pertaining to the use of AI in learning and assessment.

For more comprehensive information on academic integrity rules, principles, and disciplinary procedures, please refer to the Academic Integrity section of the Student Handbook.

BIBLIOGRAPHY :

- 1) Laudon KC & JP, (2019). Management Information Systems: Managing the Digital Firm, (16th edn). Pearson Education. [eBook <https://bit.ly/3OU675r>]
- 2) BARKAT H. How Condor Electronics implemented SAP S/4 Hana, 2020 Case study
- 3) CIO from IDG. CIOs Advance their Strategic Role. With digital transformation well under way, IT leaders are expanding their business strategy responsibilities, identifying new areas of growth and playing a hand in driving profitability. IDG Communications, Inc. 2017, 12 pages
- 4) Capgemini Consulting. 2012. Burberry's digital transformation: An interview with Angela Ahrendts, CEO of Burberry, pp. 1-6.
- 5) Dubois D., Chae I., Niessing J., and Wee J. 2016. AccorHotels and the digital transformation: Enriching experiences through content strategies along the customer journey. INSEAD Business School Case(01/2017-6241), pp. 1-25.
- 6) Dyche, J. (2015). The New IT: How Technology Leaders are Enabling Business Strategy in the Digital Age. McGraw-Hill Education. [eBook <https://bit.ly/4cLVe1s>]
- 7) Fitzgerald M., Kruschwitz, N., Bonnet, D., and Welch M. 2013. Embracing digital technology: A strategic imperative. MIT Sloan Management Review: Research Report, pp. 1-15.
- 8) MIS Quarterly Executive, September 2017, How Big Old Companies Navigate Digital Transformation. pp 197-213
- 9) Cambridge Service Alliance 2017, Digital Business Transformation and Strategy:What Do We Know So Far?
- 10) IMD. 2017. The state of digital disruption in 2017. Global Center for Digital Business Transformation, pp. 1-8 RENNES SCHOOL OF BUSINESS (Fall 2019) Page 4
- 11) McAfee A. 2006. Enterprise 2.0: The dawn of emergent collaboration. MIT Sloan Management Review 47(3), pp. 21-28.
- 12) Pearlson, K. E., & Saunders, C. S. (2021). Managing and Using Information Systems: A Strategic Approach. Wiley.

13) Ross J., and Weill P. 2002. Six IT decisions your IT people shouldn't make. Harvard Business Review 80(11), pp. 84-92.

Additional Reading

MODULE PLAN SESSIONS :

Plan Session 01 :

Session 1 – Introduction to Information Systems Digital Firms & Business Processes

In this first session, students are introduced to foundational concepts of information systems and what makes an organization a “digital firm”. They briefly explore how digital firms operate in practice, focusing on the core business processes that run across functions (such as order to cash or procure to pay) and the information systems that support them.

Plan Session 02 :

Session 2 – Information Systems, Organizational Strategy & Platforms

This session focuses on the role of IS systems in shaping organizational strategy, power & culture. Using tools like value chain and five forces to analyze platforms and digital business models.

Plan Session 03 :

Session 3 – Building and Governing Digital Transformation

In this session we move from ideas to implementation and cover the essentials of development approaches, project risks, and the role of leadership and governance in digital transformation.

Plan Session 04 :

Session 4 – IT Infrastructure & Emerging Technologies

In this session, students are introduced to IT & Cloud infrastructure that supports digital services. We trace the evolution from on-premise computing to cloud computing, technology that enables data-driven and AI-powered services.

Plan Session 05 :

Session 5 – AI & Intelligent Systems for Decision Support

This session introduces key concepts and technologies in AI and machine learning, from basic model types to common application areas. It offers a manager's view of what AI/ML systems can realistically do, what kinds of data they depend on to function, and where they tend to fail or produce unreliable outcomes.

Plan Session 06 :

Session 6 – Introduction Gen AI in business

In this session, Students learn what base models are, how they are trained, and how organizations can adapt them through approaches such as prompt engineering, finetuning, and retrieval-augmented generation to fit specific business needs. We also examine the trade-off between proprietary and open-source models.

Plan Session 07 :

Session 7 – Data, Privacy & Security

In this session, students are introduced to key risks in managing data, especially privacy and security and see how regulations such as GDPR shape the design and governance of information systems and data practices.

Plan Session 08 :

Session 8 – Group Project Presentations

Group Projects presentations