UNIVERSITÀ CATTOLICA del Sacro Cuore

Management information system

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Course aims and intended learning outcomes

The course aims at the acquisition of skills, competences and mindset required for understanding, managing and leading the adoption of effective information systems in an organization.
The structured use of information in companies and institutions is nowadays a key strategic lever for gaining a sustainable competitive advantage. Technologies in the area of data, information and knowledge management keep on developing quickly and breakthrough innovations come up every few years.
In this challenging and demanding scenario, the course explores all the main topics and analyses the key variables in order to provide a comprehensive framework and a consistent vision of all that is happening in the arena.
The first part of the course is dedicated to laying out an analytical framework, leading to a hands-on project work effort and finally investigating the latest innovations and trends in an ever-evolving context.

Expected results:

- Basic "under the hood" knowledge of key concepts for understanding the technicalities of information management systems.
- As a consequence, acquisition of the tools necessary for further comprehension and learning in order to follow innovati and build in time an ever expanding personal body of knowledge.
- General understanding of how data processing models and technologies are shaping the overall scenario and corporat behavior.
- Understanding of key drivers of choices and decisions in Management Information Systems (MIS) adoption and deployment.
- Acquiring the capability of using MIS as a way to foster the organization competitiveness in a way relevant and specific each single industry and organizational entity.
- Knowledge of newest developments in the field.

Course content

1. Module I: Basics of information systems management
   a. Introduction to IS
   b. Types of IS
   c. IS development
2. Module II: Capabilities, architecture and infrastructure
   a. Decision support systems
   b. Data analysis
   c. Big data
   d. Open source
   e. Outsourcing
   f. Cloud computing
   g. Data protection and Cybersecurity
3. Module III: Corporate and market applications
   a. Data & technology driven innovation
   b. E-commerce
   c. Mobile
   d. Social networks

4. Module IV: Change drivers
   a. Artificial Intelligence
   b. The blockchain
   c. The Internet of Things
   d. Virtual, augmented and virtual reality
   e. Quantum computing

Reading list

For non-attending students:
K.E. PEARLSON-C.S. SAUNDERS, *Strategic Management of Information Systems,* 5th ed. International Student Version, ISBN: 978-1-118-32254-3, Paperback and Ebook version.

For attending students:
Course structured handouts will by published at the beginning of the course.
Readings and other course materials will be made available electronically via Blackboard online system.

Teaching method

A variety of teaching methods will be used throughout the course, in order to encourage active learning.

Front lectures are combined with project development, role-plays, simulations, case histories discussion.

A group project work is requested to attendees. The project is about the development of a business plan for a start up for which the business model is centered on the use of information. This will allow to deploy in a quasi-real-life environment all concepts and knowledge acquired through regular lectures.

Assessment method and criteria

For non-attending students the final exam is composed by an individual written exam on the whole handbook material, through open ended questions.

The attending students will be assessed through an individual written exam on the formal content of the course, also based on open ended questions, accounting for 60% of the overall mark, as well as a group project work, accounting for the remaining 40%. The group project work will be delivered at the end of the course and will be presented orally by all the project teams.

For both attending and non-attending, the standard written test has a similar structure, including 5 open questions.

The first 4 questions bear reference to specific content in the documentation (the book for non-attending and the handouts for attending) and what is required is simply to report the content itself, eventually expanding on details and implications. The last question will cover a broader ground, requiring the student to put together different pieces of the puzzle, combining knowledge in order to provide a complex answer to a practical issue.

Notes and prerequisites

No IT skills, hardware or software knowledge is required. Basic concepts will be exposed and made comprehensible inside the course. The course actually has little to do with specific technical knowledge such as coding, therefore it is accessible to anyone.