# Computer Science and Information Systems

## Prof. Francesco Tornieri

***COURSE AIMS AND INTENDED LEARNING OUTCOMES***

Nowadays companies, whose success depends on the effective use of digital innovation, need resources both competent in terms of technological knowledge and aware of the impact deriving from the use of new technologies on operational and strategic management. The course aims to provide students with a general understanding of the issues related to technological innovation in companies and society, data and information management, the Internet, digital business models, business information systems and their organisational and management implications. The course also aims to teach students to apply their newly-acquired knowledge in the business context, formulating interpretations and independent judgements, and in an academic context, when taking other courses on the linguistics degree programme and with a view to advancing their studies further in the field of corporate information systems.

At the end of the course, students will:

– know and understand the main trends in the digital world and their impact on companies and society;

– appreciate the relevance of digital tools for business activities and processes, with particular regard to marketing and communication;

– apply the knowledge acquired during the course according to a professional approach aimed at designing new business models that enhance people, processes and technological infrastructures in a synergic and systemic perspective;

– interpret and make independent judgments, also regarding IT security, ethical and social issues generated by the use of technologies;

– acquire technical language that enables effective communication with both people with advanced technical and IT skills and with end users;

– develop good learning skills that allow students to undertake more advanced studies related to company information systems with greater autonomy.

***COURSE CONTENT***

1 *Introduction to the role of technologies in the business world* as a fundamental component for successful organizations;

2. *new digital trends*: digital transformation processes in companies and technological evolution in the information society;

3. *ethical and social aspects of the digital economy*: ethical issues generated by the use of technologies and fundamental principles of computer security;

4. *from data to knowledge*: systems for data organisation and management, for the research and processing of information to support decision-making activities, with particular emphasis on the management of Big Data and Data Analytics activities;

5. *digital markets and platforms*: Internet, e-business, corporate networks and business change;

6. *new media and digital marketing:* strategies and tools for online communication and promotion, customer experience;

7. *new digital skills*: evolution of skills in companies as a result of recent technological transformations and development of new professional figures in the digital environment;

8. *introduction to corporate information systems*: outline of corporate architectures supporting the operational, tactical and strategic needs of companies.

9. *principal functions of Excel sheets*: formulas and functions, logical and graphic functions, ordering data and filters.

***READING LIST***

Adopted textbook:

J. Valacich-C. Schneider-A. Carignani-F. Rajola-V. Gemmo, *Sistemi Informativi e Trend Digitali*, Pearson Italia, 2019.

In addition, all the material regarding Excel sheets will be available on Blackboard.Lecture support material is available on Blackboard in the course area: the lecturer will post the slides used in the classroom, in-depth study material on the most significant topics of the course, the reading list, some articles and the suggested webography.

***TEACHING METHOD***

Lectures with examples and case studies developed in the classroom, speeches by experienced guests from companies. The main functions of Excel will be explored in detail both in the classroom and during individual study.

***ASSESSMENT METHOD AND CRITERIA***

The examination aims to assess the achievement of the course aims outlined above as well as students’ progress. The *assessment criteria*  are as follows:

* satisfactory development of knowledge and skills related to the various areas of content;
* clarity, accuracy and relevance when discussing course content and use of appropriate technical language;
* ability to correlate different content systematically;
* critical analysis of the impact technology has within organisations and on the management of its stakeholders

The examination consists of a written paper containing open-ended questions and closed questions (multiple choice). The closed questions are designed to assess students’ theoretical knowledge and understanding, the open-emded questions are designed to assess students’ ability to translate that knowledge in an applied manner or to identify the main implications.

More detailed information regarding course content can be found on Blackboard in the course area.

***NOTES AND PREREQUISITES***

*Computer skills*

Basic courses of the Office modules are available on Blackboard in self-learning mode: Word, PowerPoint and Excel.

The European Computer Driving License (ECDL) is not required for the General IT course and does not exempt students from taking nor passing the exam. The lecture calendar and the analytical course contents will be provided directly by the lecturer during the first lecture and will be published on Blackboard in the course area.

Further information can be found on the lecturer's webpage at http://docenti.unicatt.it/web/searchByName.do?language=ENG or on the Faculty notice board.