

Master of Science e-Governance

Courses description

e-Government

This course provides knowledge about e-government, offering an overview on this major European challenge. E-Government is seen as a result of research and for this reason it can be considered as a currently developing domain. At the end of the course, students will have the following skills:

- They will know the e-Government vision, objectives and effective development strategies;
- They will distinguish between informational and transactional flows.
- They will get notions of design and implementation of e-Government flows.
- They will know the specific e-government electronic services.
- They will be able to know the models and principles of e-Government architectures and to develop specific applications using electronic services.

They will be able to design, implement and deploy electronic forms and a specific portal dedicated to the interactions between a user and an administrative institution.

Decision-making in e-government

In modern democracies, e-governance offers benefits for citizens by accelerating and automating the interface citizen-government processes and by increased transparency of government functioning. Decision-making processes play a special role, their impact on citizen participation as well as the direct participation of people in the decision act. The course deals with analysis and decision making processes in e-government, steps and information technology tools that can be used in decision making. Practical applications are organized as project work, done in teams of 3-5 students. The project will conduct a case study on an e-government issue with emphasis on identifying workflows and decision making processes. Students will develop a decision support tool. The course

contributes to the professional and transversal competences necessary for future computing services consultants, auditors, architects of e-services for e-government.

Methodology for consultancy in e-services

This course introduces basic methods for analyzing the effectiveness of e-services designed to support and improve processes in public organizations, using information technology. The course covers three areas of knowledge: modeling organizations and services that allows the definition of e-services to support real needs based on the most advanced technologies in the field of service computing, business performance analysis based on domain specific standards and development of capability and maturity models. Practical applications are organized as project work, done in teams of 3-5 students. The students have to conduct an analysis of a sistem/service, based on quality standards. Within the application hours, the students will have developpe an audit plan and a compliance analysis of an ISMS, according to ISO 27001, as well as a technical bid based on requirements specified in a specification. The course contributes to the professional and transversal competences necessary for future computing services consultants, auditors, architects of e-services for e-government.

Management of e-government projects

One major research direction is represented by citizen-oriented e-government applications, based on e-services. For this reason, the course deals with ITIL framework (Information Technology Infrastructure Library). ITIL has an impressive reputation in addressing and developing IT service management and it continues to offer solutions for improving service management in various institutions and organizations in the public or private sector. Service management is concerned with more than just delivering services. Each service, process or infrastructure component has a lifecycle, and service management considers the entire lifecycle from strategy through design and transition to operation and continual improvement.

The applications of this course consist of presenting and implementing the development methodology for the projects on European funds.

The Psychology of the e-Services User

A huge variety of e-services are available today. Besides functionality, they are expected to enable users to interact with them accurately, efficiently, and with a reasonable level of

satisfaction. Hence, a principal goal of the course is for students to develop an awareness and sensitivity for user needs and abilities as they interact with computer applications, websites and other interactive devices. Students will be introduced to basic aspects of human behavior that influence the design, development, and use of new e-services in order to: articulate the cost and consequences of ineffective e-services design to users, organizations and society; articulate psychological theories explaining human capabilities and limits as they apply them to e-services design; identify usability and accessibility issues for diverse user populations; analyze and specify the goals and needs of users; observe users interacting with e-services and diagnose problems using theoretical constructs; plan, prototype, evaluate, and document the user-centered rationale for an e-services design project.

Adaptive and Collaborative Systems

The course has as goals the assimilation of concepts, theories, algorithms and techniques specific to adaptive, personalized and collaborative systems. It begins with a comparative analysis of the web generations (Web1.0, Web2.0 – the Social Web, and Semantic Web), making a parallel between the cognitive and socio-cultural paradigms. The first half of the course is considering adaptive systems. It discusses user modeling: cognitive, conative and emotional. It presents the basis of personalized and adaptive systems, adaptive interfaces, hypertext adaptive systems, intelligent tutoring systems, and recommendation systems. The second part of the course deals with the theory and applications specific for the social web: Communities of practice, Activity Theory, the theory of collective memory, imaginary, social networks (analysis and metrics), folksonomies, computer-supported cooperative work (CSCW), Groupware, Computer-Supported Collaborative Learning (CSCL).

Research activities

The research activity aims the use of acquired knowledge about modern technologies, in the integration of IT systems and services, in the field of e-government. It aims to improve skills necessary for the analysis, design and development of complex systems and software applications, using modern technologies, both by independent work or in and in teams.

It aims to develop the ability to analyze a problem, to conduct research with high complexity, to integrate research teams and solve real problems in the field of e-government systems.

Module research is dedicated to developing research topics extremely complex, usually in connection with research projects of hours teachers who master this module or projects in partnership with companies. Research topics will be chosen from a portfolio at the beginning of the first semester of the master studies. It is recommended to develop the subject of the research during the 4 semesters and to include the research results in their master's thesis.

Evaluation has the following components: presence and activity - 30% Research Report - 50% and the final presentation - 20%. During the master studies, the students will have to publish the results either in the Computer Science Master Research journal, at scientific sessions for students or in other journals / events