

⚠ [1] ⚠ [1]

[digital services development engineer curriculum](#) [2]

# Smart Information and Communication Technology Engineer

Department of Smart ICT Engineering « Smart  
Communication Technology Engineering

## Curriculum

The training is organized in three semesters (S1, S2, S3) allowing to provide all engineering students of the program with a solid background in scientific and technical tools. At the end of the two semesters S4 and S5, specialization courses representing a main issue for the "Digital Services Development Engineer" profession are provided. While Semester 6 is reserved for a final year project.

### S1

Basic and specialized scientific and technical modules

Graph, Operational Research and Project Management

Graph and Operational

Project management

Programming I

Paradigms and program

Advanced POO

Databases

Relational databases

Semi-structured databa

Systems and Networks I

Introduction to operati

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		Computer networks
	Mobile Communications and Coding	Micro-controller and int Evolution of generation Introduction to informa
Management modules	The engineer and their environment	Role and ethics of the e Getting started project Raising awareness abo and intellectual proper
Language, Communication and ICT modules.	Language and Communication techniques	English Expression and commu
Basic and specialized scientific and technical modules	Algorithms and Applied Statistics	Applied Statistics
	Algorithms and Programming II	C ++ programming Parallelism and distribu 2D and 3D design and Systems and Networks II
		Operating systems eng Corporate interconnect

<b>S3</b>	Management modules	Corporate management and finance	Introduction to corpora  Introduction to financia
	Language, Communication and ICT modules.	Languages, Communication and Expression and Communication Techniques	English
			Expression and commu
			Project
	Basic and specialized scientific and technical modules	Advanced data management	Big Data and NoSQL
			Database administratio
		Web and Mobile Development	JEE web Development
			Android and iOS mobile
		System Administration and Virtualization	System administration
			Virtualization
Analysis and Design of Software Systems		Object-oriented analys	
	Software Engineering a		
	UX & UI design		

	Computer security	Basics of computer security
		Cyber Security: Policies and Procedures
	IT Networks and Telecommunications	TCP / IP Architecture and Protocols
		Introduction to IPv6
		Wireless networks
Management modules	Entrepreneurship and Innovation	Entrepreneurship
		Design thinking
Language, Communication and ICT modules.	Languages, Communication and personal development	English
		Communication and presentation skills
Basic and specialized scientific and technical modules	Intelligent and Decision Systems	Implementation of a decision support system
		Machine learning and Data Mining
	Urbanization, SOA and BPM	SOA and Web Services
		Modeling and implementation of business processes
		Urbanization of IT systems

	Software Architecture & API	Software architecture  API design and management
	Cloud Computing and IoT	Embedded systems and  Cloud computing (IaaS)  Real Time services engineering
Management modules	Management of Projects and IT Services	IT project Management  IT service management
	Sociology of organizations and companies	General management and  Intercultural Management
Language, Communication and ICT modules.	Languages, Communication and Expression and Communication Techniques	English  Communication and presentation
	Project	Mini-project : of engineering

<b>S5</b>	Basic and specialized scientific and technical modules		Mini-project technologi
		Emerging Services Engineering	IoT Services Engineerin
			Machine Learning in BI
			Serverless application
		Advanced Secure Mobile and Web Development	Development and secu applications
			Development and secu
		Integration and Advanced Architectures	Enterprise Integration I
			Model Driven Architect
			Microservices Architect
		IT Trends	Semantic Web
		Blockchain	
		Digital transformation a	
	Governance and Information System Security Management	Governance of IT syste	
		Information System Se	
	Management modules	Digital regulation and public procurement Regulation	Cyber security Vs Cybe

		Public procurement reg
Language, Communication and ICT modules.	Languages, Communication and Expression and Communication Techniques	English
		Expression and commu

Final year project

### [3] [Return](#) [4]

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