Infocommunications Specialization

Overview

In today's world, fast-evolving, intelligent networks are transforming how we live, work, and connect. Our specialization is designed for those ready to lead in this digital revolution, focusing on the creation and management of advanced cloud systems, network infrastructures, and complex applications that are becoming increasingly crucial in various aspects of daily life.

You'll dive into the heart of modern networking, exploring cutting-edge technologies like cloud-based solutions, cloud native technologies, software-defined networking, network function virtualization, and the groundbreaking application of machine learning to network intelligence. This program is not just about learning the current state of technology; it's about pushing the boundaries to develop new, more efficient, and intelligent network services and solutions that can adapt in real time, gather extensive data, and enhance the reliability and efficiency of digital services.

What We Offer

We aim to equip you with deep, practical knowledge in key areas such as cloud applications, software-based network functionalities, and operational support for network services. Our curriculum is carefully designed to ensure you gain a strong theoretical foundation, structured and systematic understanding, and the skills necessary to innovate and operate the networks of the future.

By choosing our specialization, you're not just preparing for the digital landscape of today but shaping the technological innovations of tomorrow. Whether your interest lies in designing robust network architectures, implementing smart network management practices, or leading the next wave of digital transformation, our program offers the knowledge, skills, and real-world insights to help you achieve your ambitions and excel in the rapidly evolving tech sector.

Program Description

The Infocommunications Specialization is a result of a dynamic collaboration between the **Department of Telecommunications and Media Informatics** and the **Department of Networked Systems and Services**, offering a curriculum that is at the forefront of technological education and industry trends.

Our curriculum is designed to immerse you in the core of infocommunications technology through a range of cutting-edge courses:

- **Development of Cloud Native Network Functions (vitmac12):** Dive deep into the Cloud Native paradigm and technologies used to develop and operate modern network functions exploiting "cloud APIs". Through practical examples, students gain proficiency in using the tools introduced, experimenting with them on leading cloud platforms (e.g., Amazon AWS) and the open-source Kubernetes platform.

- **Network and Traffic Management (vihiac11):** Master the art and science of optimizing network performance and traffic flow using artificial intelligence and machine learning. This course equips you with the tools and techniques to ensure efficient, secure, and reliable network operations, essential for the smooth functioning of digital services.

- **The Role of Mobile Networks in Digitization (vihiac10):** Explore how mobile networks are pivotal in the digitization of society. Learn about the latest developments in mobile technologies and their application in transforming industries, enhancing connectivity, and fostering innovation in the digital age.

- **Cloud Native Technologies Laboratory (vitmac13):** Get hands-on experience with cloud native technologies. This laboratory course is designed to give you a real-world understanding of developing, deploying, and managing applications in cloud environments, such as Amazon AWS and Kubernetes.

Each course in our specialization is crafted to provide you with a deep understanding of the current and emerging technologies in the field of infocommunications. By joining our program, you're not just enrolling in courses; you're stepping into a world of innovation where technology meets practical application, equipping you with the skills to lead in the digital transformation journey.