

Course title: Communications Security and Data Protection

(Original Slovenian title: Varnost komunikacij in zaščita vsebin)

Course code: 63289

ECTS: 6

Professor: Vlado Stankovski

[Profile: <https://www.fri.uni-lj.si/sl/o-fakulteti/osebje/vlado-stankovski>]

Undergraduate/ master program

This course is designed for integration into both undergraduate and master programs in computer science and related fields. Its flexible curriculum is adaptable to various study programs, providing a robust foundation in communications security and data protection.

Prerequisite knowledge:

Entry-level knowledge and skills in software engineering.

Short course description:

This course provides a comprehensive exploration of the principles and practices of communications security and data protection. It covers essential topics such as secure communication protocols, cryptographic methods, and digital content protection while balancing theoretical foundations with practical applications. The curriculum is broadened to address emerging technologies and modern challenges in software engineering, including:

- **Emerging Technologies:** Integration and security challenges in the Internet of Things (IoT), Blockchain, Artificial Intelligence (AI), Cloud-to-Edge computing, and Digital Twins.
- **Security and Privacy:** Advanced methods to ensure digital identity management, privacy preservation, and overall system security.
- **Software Engineering Requirements:** Best practices for designing, implementing, and managing secure software systems in modern distributed environments.
- **Research and Innovation:** Opportunities for mentorship on diploma and master thesis projects in areas such as cryptographic protocols, data protection techniques, digital rights management, network security, and applications of emerging technologies.

Under Professor Vlado Stankovski's guidance, students can tailor their research to emerging trends and industry challenges, ensuring that a wide variety of study topics are available to meet both academic interests and the evolving needs of modern software engineering.