

Title Telecommunication mobile systems	Code 1010331471010330671
Field Computer science	Year / Semester 4 / 7
Specialty Informatics technology	Course core
Hours Lectures: 1 Classes: - Laboratory: - Projects / seminars: 1	Number of credits 8
Language polish	

Lecturer:

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Status of the course in the study program:

Obligatory course for Internet technologies specialization.

Assumptions and objectives of the course:

Practical and theoretical knowledge about leading and fast developing technologies of communication mobile systems. Ability to project and implement systems which contain mobile access to services (web services). Keywords connected with Future Internet, implementations of heterogeneous networks with multiple access, Wi-Fi networks, dynamic routing and mobile terminals.

Contents of the course (course description):

1. Web Services Technologies (SOAP, REST). Integration of B2B systems based on Web Services in 3G and IMS technologies. Other technologies: SIP, RTP, DTMF, VXML, RTSP, 3GPP IMS (IP Multimedia Subsystem).
2. Security access to telecommunication mobile systems, AAA technology (Authentication, Authorization and Accounting).
3. Java, SIP, http, codecs and AV files, gathering data from heterogeneous sources (video, audio). IMS Web Services, Mash-up services.
4. Applications with heterogeneous interfaces: SIP-HTTP, HTTP-DTMF.
5. Systems supporting mobility in MANET networks. OLSR protocol.

Introductory courses and the required pre-knowledge:

Knowledge from computer networks technologies course.

Courses form and teaching methods:

Lectures.

Project:

1. Use of the new tools which support experimental verification of students knowledge (virtualization methods of network elements and own student's work).
2. Projects exercises consist mainly in modifications and extensions implementing by students from functional elements from network systems:
 - source code of communication protocols (OLSR),
 - implementation of working protocols in MIT Click Modular Router,
 - source code from Fokus Open IMS Core environment,
 - installation of full environment Fokus Open IMS Core.

Form and terms of complete the course - requirements and assessment methods:

Examination.

Rank from projects:

- from presentations of the project; report for every class,
- from implementation and summarization of a developed project.

Basic Bibliography:

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Additional Bibliography:

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