

STUDY MODULE DESCRIPTION FORM		
Name of the module/subject Wireless Internet Access		Code 1010802231010812347
Field of study Technical Applications of Internet	Profile of study (general academic, practical) (brak)	Year /Semester 2 / 3
Elective path/specialty -	Subject offered in: Polish	Course (compulsory, elective) obligatory
Cycle of study: First-cycle studies	Form of study (full-time, part-time) full-time	
No. of hours Lecture: 1 Classes: - Laboratory: 2 Project/seminars: -		No. of credits 4
Status of the course in the study program (Basic, major, other) (brak)		(university-wide, from another field) (brak)
Education areas and fields of science and art technical sciences Technical sciences		ECTS distribution (number and %) 4 100% 4 100%
Responsible for subject / lecturer: dr hab. inż. Paweł Szulakiewicz, prof. nadzw. email: szulak@et.put.poznan.pl tel. 61 6653870 Faculty of Electronics and Telecommunications ul. Piotrowo 3A 60-965 Poznań		
Prerequisites in terms of knowledge, skills and social competencies:		
1	Knowledge	Student knows principles of radiocommunication systems, transmission of signals in wireless channels and digital communication systems. (K_W01,W02,W04)
2	Skills	Student is able to compare and evaluate digital communication systems, understands parameters of such systems and is able to evaluate wireless channels. (K_U9, U10, U12)
3	Social competencies	Student knows limitations of his knowledge and skills. He understands the necessity of professional approach to engineering problems. (K_K01,K04)
Assumptions and objectives of the course: The purpose of the course is to teach the students wireless networks which make wireless access to the internet possible.		
Study outcomes and reference to the educational results for a field of study		
Knowledge: 1. Student knows the structure, parameters, advantages and disadvantages of different wireless networks (for example: WiFi, 802.15, 802.16, UWB, H2, networks with LESs,...) - [K_W13]		
Skills: 1. Student is able to design and deploy the WiFi network - [K_U12] 2. Student is able to compare different wireless networks and put forward the right one - [K_U12] 3. Student is able to create professional opinions concerning the wireless networks and their applications - [K_U12]		
Social competencies: 1. Student understands the necessity to study the new technologies and standards of the wireless networks - [K_K01] 2. Student understands the challenges coming from the rising demand for transmission rate and spectrum. - [K_K07]		
Assessment methods of study outcomes		
Oral examination. Continuous assessment of the laboratory problems solving		
Course description		

WiFi network, 802.11 a,b,g,n,ac,... The physical, link and network layers. MIMO technique. Multiaccess protocols. ICI cancellation Wireless networks review (WiMAX, H2, Bluetooth, ZigBee, ...)		
Basic bibliography: 1. Selected chapters from the wireless network standards 2. Papers in scientific journals and internet 3. WiFi guide		
Additional bibliography:		
Result of average student's workload		
Activity	Time (working hours)	
1. Lectures	15	
2. Laboratory	30	
3. Student self-study	45	
Student's workload		
Source of workload	hours	ECTS
Total workload	90	4
Contact hours	45	3
Practical activities	15	1