Code 05-EIT-EMS-CP-SP5 (fall semester), 05-EIT-EMS-CP-SP6 (spring semester)

Course item: .....

1. INFORMATION ABOUT THE COURSE

A. Basic information

Name of course	***Communication Protocols***
Study level	*First degree*
Unit running the study programme	*Faculty of Telecommunication, Computer Science and Electrical Engineering*
Study programme	*Electronics and Telecommunications*
Speciality	
Name of teacher (s) and his academic degree	*Piotr Kiedrowski, PhD*
Introductory courses	*Principles of IT*
Prerequisites	*no prerequisites*

B. Semester/week schedule of classes

Semester	Lectures	Classes	Laboratories	Project	Seminars	Field exercises	ECTS
winter or summer			30				4

2. EFFECTS OF EDUCATION (acc. to National Qualifications Framework)

Knowledge	*on the successful completion of the course, student is supposed to know: classification and the area of usage of the communication protocols.*
Skills	*on the successful completion of the course student is supposed to implement and also to test a standard protocols and to project new ones.*
Competences	*on the successful completion of the course student is supposed to realize the conformance tests.*

3. TEACHING METHODS

Lab

4. METHODS OF EXAMINATION

short paper at the beginning of every lab

5. SCOPE

Laboratories	1. *Protocol analyzing with the use of K1205 Tektronix protocol tester.* 2. *Protocol projecting with use the of K1205 Tektronix protocol tester.* 3. *Net-5 protocol set for conformance testing of LAP-D with Q.921 ITU-T Recommendation with use of the K1195 Tektronix protocol tester.* 4. *ISDN Services and DSS-1 analyzing with the use of IBT-100 Accterna tester.* 5. *SNMP, FTP, HTTP and NTP analyzing with the use of WireShark Network Protocol Analyzer.* 6. *Projecting and implementing the own Routing Protocols for WSN.* 7. *SLIP protocol software implementation.*

6. LITERATURE

Basic literature	1. *Gillespie A., 1997. Access Network: technology and V5 interfacing . Artech House. Inc.* 2. *Integrated Services Digital Network (ISDN) – User - Network*

	Interface Data Link Layer Specification, ETSI ETS 300 125. V5.2 Interface Specification for the Support of Access Networks, ETSI Specification ETS 300 347. 3. *Al-Karaki J.N., Kamal A.N., 2004. Routing techniques in wireless sensor networks: a survey. Wireless Communications IEEE, vol. 11, Issue 6, 6-28.* 4. *Javvin Technologies Inc., 2006. Network Protocols Handbook, 2nd Edition, 13485 Old Oak Way Saratoga CA 95070 USA, p. 342*
Supplementary literature	1. *Wattenhofer R., 2004. Wireless Networking Graph Theory Unplugged, ETH, Zurich. Ilyas M., Mahgoub I., 2005. Handbook of Sensor Networks: Compact Wireless and Wired Sensing Systems. CRC Press.*