SYLLABUS

1. Course title:

Telecommunication Protocols

2. Code:

TK003

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

7. Class restrictions:

8. Duration / semester:

1 5

9. Weekly contact hours:

9.1. Lectures: 3

9.2. Seminars: 1

9.3. Laboratory/Practice classes: 1

10. Faculty:

Faculty of Electrical Engineering

11. Department/study program:

Electrical Engineering and Computer Science

12. Lecturer:

Assoc.Prof. Samra Mujačić, PhD

13. Lecturer's e-mail:

samra.mujacic@untz.ba

14. Web site:

15. Course aims:

The course aims to familiarize students with network communication models, communication protocols, design procedures, formal specification and verification, and protocols' analysis and synthesis.

16. Learning outcomes:

Students will be able to:
- Identify, categorize and compare different communication protocols;
- Formally specify and verify communication protocols;
- Perform analyses and synthesis of communication protocols.

17. Course content:

Theoretical models of network communication and coordination. Communication protocols: exchange of PDU, network communication management, flow control, error control. Model of communication protocols, methods of protocols' analysis and synthesis, structure and functions of communication protocols. Formal modeling of communication protocols. ISO-OSI reference model . TCP/IP reference model. Communication protocols in IP-based networks. Signaling protocols (SS7, SIP, H.323, etc.). Multimedia communication protocols.

18. Learning methods:

The most significant learning methods are as follow:
- Multimedia-based lectures and active learning techniques;
- Tutorials;
- Individual laboratory assignments;
- Essay.

19. Assessment methods:

First written assessment is to be delivered after half of the semester, which includes processed themes during the first part of the semester. Second written assessment is to be delivered at the end of the semester, which includes processed themes during the second part of the semester. The access to the second assessment is limited to the students who have passed the first one. Both assessment could be taken only once by the student. Students who do not pass those two assessments approach the final written exam, which carries the same points. As part of the pre-exam activities students are required to successfully complete all lab assignments. During the work in laboratory a teaching assistant assess the theoretical and practical knowledge of students. The final exam is oral for students who have passed both periodical assessments. The final exam is written and oral for students who have not passed the periodical assessments.
The results of continuous and final assessments are recognized as the passed exam if the cumulative result is achieved upon the positive verification of the individual assessment and is at least 50% of the scheduled and/or the required knowledge and skills.
In order for the student to pass the course he/she must achieve a minimum of 54 cumulative points.

20. Assessment components:

- I Continuous Assessment
  1. In-class attendance (5%)
  2. Assignments (10%)
  3. Essay (20%)
  4.Periodical assessments (50%)
- II Final oral assessment (15%)

21. Required reading list:

- P.Venkataram, S.S.Manvi, B.S. Babu, Communication Protocol Engineering, 2014.
- A.Rivas, The OSI Model for Network Engineers: Improve Your Network Troubleshooting, 2015.
- D.E.Commer, D.L.Stevens, Internetworking with TCP/IP Vol. I, II, III, 2001

22. Web sources:

(max. 687 characters)

23. Applicable starting from the academic year:

2016/2017

24. Adopted in the Faculty/Academy session:

04.04.2016