SYLLABUS

1. Course title:

Multimedia Systems and Communications

2. Code:

TK304

3. Cycle of study:

1

4. ECTS credits:

6

5. Type of course:

(•) Mandatory ( ) Elective

6. Prerequisites:

[TK003] Telecommunication Protocols, [TK204] Information Theory and Coding

7. Class restrictions:

8. Duration / semester:

1 8

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 aim of this course is to teach teach students in audio and video code schemes, multimedia production, integration and applications, and multimedia communications and protocols.

16. Learning outcomes:

Students will be able to:
- Identify, categorize and compare different media types, associated formats and encoding schemes;
- Use applications for production and analyses of different media types;
- Examine and compare different multimedia applications;
- Examine and compare different multimedia communication architectures and protocols.

17. Course content:

Multimedia technologies and systems, its architecture and implementation. Media types; encoding and compression. Multimedia processing, transmission and storage. Multimedia integration and synchronization. Interactive and adaptive multimedia. Multimedia applications, standards and authoring tools. Multiuser multimedia applications. Multimedia communication systems. Multimedia communication protocols. Streaming media. QoS in multimedia communications. Multimedia services.

18. Learning methods:

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

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 (20%)
  3. Project (10%)
  4.Periodical assessments (50%)
- II Final oral assessment (15%)

21. Required reading list:

- R. Steinmetz, K. Nahrstedt, Multimedia Systems, Springer, New York, 2010.
- K.R. Rao, Z.S. Bojkovic, D.A. Milovanovic, Introduction to multimedia communications: applications, middleware, networking, Wiley, 2005.

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