Study program: Information Technology	
Course title: MULTIMEDIA TECHNOLOGY AND SYSTEMS	
Teacher(s): Vladimir M. Mladenović, Nebojša Lj. Stanković	
Course status: elective	
Number of ECTS credits: 6	
Prerequisite courses: none	

Course objectives

An acquaintance of students with basic concepts, methods, technologies, and tools for the creation, compression, processing, manipulation, delivery, and protection of multimedia contents and systems.

Learning outcomes

Compilation of basic technologies and techniques for manipulation of multimedia content. Students will be able to create and process various multimedia content in software packages, including text, graphics, images, audio, and video content.

Content of the course

Theoretical teaching

Basic multimedia elements (text, graphics, images, sound, video); technologies and standards; compression techniques; multimedia and communication systems; multimedia and databases; multimedia and wireless technologies; protection of multimedia systems, cloud computing for multimedia services, digital video, and digital sound.

Practical teaching

Work in leading software packages: Matlab, Camtasia Studio, MS Office, Adobe Photoshop, Adobe Audition, Adobe After Effects, and Adobe Flash. Within the course, students do one seminar paper on one of the offered topics.

Literature

[1] D. Mishra (2021), *Learning How to Learn Using Multimedia*, Springer Verlag, Singapore, ISBN 9789811617836, https://www.researchgate.net/publication/351048747_Learning_how_to_learn_using_multimedia/link/608112a78ea909241e16df8d/download

[2] A. Faulkner, C. Conrad (2020), *Adobe Photoshop CC Classroom in a Book (2020 release)*, Pearson Education, ISBN 0-13-644799-6, 9780136447993, https://vdoc.pub/download/adobe-photoshop-classroom-in-a-book-2020-release-6vh7khh2b660

[3] Y. Zang, Y. Xiang, L. Y. Zhang, (2019), *Secure Compressive Sensing in Multimedia Data, Cloud Computing and IoT,* Springer nature Singapore Pte Ltd., ISBN 9789811325229

[4] V. Mladenović, N. Stanković (2019), *Multimedijalne tehnologije i sistemi*, udžbenik, Univerzitet u Kragujevcu, Fakultet tehničkih nauka u Čačku, ISBN 9788677762315

[5] Н. Дучић (2021), *Интелигентно моделирање и управљање* - МАТЛАБ симулације, Универзитет у Крагујевцу, Факултет техничких наука у Чачку, ISBN 9788677762520

[6] A. Gilmas (2008), Uvod u Matlab 7.5: sa primerima, Mikro knjiga, ISBN 9788675553274

Number of active teaching classes: 4	Theoretical teaching: 2	Practical teaching: 2

Teaching methods

- Interactive teaching with multimedia content.

- Computational exercises and laboratory exercises in the computer classroom.

Evaluation of knowledge (maximum number of points 100)

Pre-exam obligations	Points	Final exam	Points
Activities during teaching process	10	Final exam (written):	30
Seminary work	20	Final exam (oral):	20
Colloquium	20		