



## COURSE DESCRIPTION CARD - SYLLABUS

Course name

RECENT ADVANCES IN MULTIMEDIA

### Course

Proposed by Discipline

Information and communication technology

Type of studies

Doctoral School

Form of study

full-time

Year/Semester

II/4, III/6

Course offered in

English

Requirements

elective

### Number of hours

Lecture

4

Tutorials

Projects/seminars

### Number of credit points

1

### Lecturers

Responsible for the course/lecturer:

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Faculty of Computing and Telecommunications

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Responsible for the course/lecturer:

### Prerequisites

Knowledge: general knowledge on research in technology, fundamentals of multimedia and image, video and audio processing.

Skills: -

Social competencies: -

### Course objective

To understand research and development in multimedia and their impact on technology and society, and also to understand the respective research drives. To learn basic research approaches and their results.



### Course-related learning outcomes

#### Knowledge

A PhD student who graduated from doctoral school knows and understands:

- 1) influence of video coding on economy, technology, environment and social life, [P8S\_WG/SzD\_W01], [P8S\_WG/SzD\_W02]
- 2) research methodology in video coding, [P8S\_WG/SzD\_W03]
- 3) new methods recently developed in video coding; prospective future achievements in video coding, [P8S\_WK/SzD\_W07]
- 4) influence of 3D and immersive media on economy, technology, environment and social life, [P8S\_WG/SzD\_W01], [P8S\_WG/SzD\_W02]
- 5) research methodology in immersive media, [P8S\_WG/SzD\_W03]
- 6) new multimedia methods and multimedia systems recently developed; prospective future achievements in video coding 3D and immersive media. [P8S\_WK/SzD\_W07]

#### Skills

A PhD student who graduated from doctoral school can:

- 1) improving the research skills by studying research methodology used in recent developments. [P8S\_UW/SzD\_U03], [P8S\_UO/SzD\_U09]

#### Social competences

A PhD student who graduated from doctoral school is ready to:

- 1) not relevant.

### Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

PQF code	Methods for verification of learning outcomes	Assessment criteria
W01, W02, W03, W07	Oral examination	Acceptance level - 50%
U03, U09	Oral examination	Acceptance level - 50%
-	-	-

### Programme content

1. Video coding (Economical and technological requirements, State-of-the-art and current challenges, Forthcoming technology).
2. 3D and immersive media (Economical and technological requirements, State-of-the-art and current challenges, Forthcoming technology).

### Teaching methods

Lecture: presentation including illustrations and examples.



## Bibliography

### Basic

1. Overview papers from the top journals on the topic – the individual papers are assigned by the lecturer individually to students interests and current status of research and development.

### Additional

1. - Recent ISO and ITU standards on multimedia

## Breakdown of average student's workload

	Hours	ECTS
Total workload	12	1.0
Classes requiring direct contact with the teacher	6	0.5
Student's own work (literature studies, preparation for tutorials, project preparation) <sup>1</sup>	6	0.5

<sup>1</sup> delete or add other activities as appropriate