Subject code	Credits
INF1012	4

Title

SKAITMENINIS GARSAS

Title in English

DIGITAL SOUND TECHNOLOGIES

Subject goal and annotation

Course provides information and knowledge about digital sound technology. Considered application areas include digitization of sound, sampling, DSP, audio editing, mixing, MIDI technologies, surround sound, audio interfaces, digital audio formats, codecs, etc.

Prerequisites

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Relationship between the learning outcomes of the Programme and learning outcomes of the subject

Learning outcomes of the Programme	Learning outcomes of the subject	Criteria for measuring the achievement of learning outcomes
4. Knowledge of basic and advanced multimedia theories and applications, ability to apply it.	Knowledge of digital audio theory, ability to edit sounds	Student demonstrates the ability to import, edit, and export sounds.
6. Knowledge of Internet and multimedia products development, their commercial and social impact. 13. Ability to analyse the newest trends in Internet and multimedia systems (and general computer science and digital arts) and apply them in development of novel systems.	Knowledge and abilities to produce audio clips, sound effects, sound for video clips etc. for internet distribution.	Students demonstrate the ability to produce audio clips for distribution on Internet.
9. Perform interdisciplinary research and development/creation in multimedia area, apply results in practical applications. 11. Analysis, design and development of advanced Multimedia systems.	Choose and apply audio recording, editing and mixing tools.	Students demonstrate skills to record, to edit and to mix sounds.
14. Ability to analyze and evaluate art projects.	Ability to analyse audio clips.	Students demonstrate skills to evaluate sounds and adjust, change it.
17. Personal development skills - planning of studies based on the personal needs and tendencies in industry.	Ability to select and accomplish project.	Oral student presentation including presentation of audio recording, mixing and results – audio clip.

Subject content

	Lecture topics and contents	Hours
1.	Digital sound history	3
2.	Audio formats, codecs	3
3.	Signal path **–** mixing consoles, microphones	3
4.	Audio editing software, sampling	6
5.	MIDI technologies	3
6.	Sound recording, editing, mixing	9
7.	Internet audio	3
	Total	**30**

Practical work contents

1. Sound recording, editing, and mixing. 2. Importing and exporting sounds, using different formats, codecs. 3. Sound design (Audio+MIDI)

Evaluation of study results

Final written exam (50%), mid-term project (17%), and assessments of laboratory (practical) work (33%).

Distribution of subject study hours

Lectures	30
Laboratory work	30
Individual studies (including studies in groups, preparation for the mid-term and final exams)	44
Total	**104**

Recommended literature

No	Authors of publication and title	Number of copies available		
		in the Library of VMU	*in specialized publication collections at VMU*	*in other libraries*
Basic materials				
1.	Glen M.Ballou "Handbook for sound engineers "Focal press". 2007		2	
2.	Borko Furht (Editor-In- Chief).(2006) Encyclopedia multimedia, Florida University of Springer, Atlantic. 2006		1	
Supplementary materials				
1.	D. M. Huber, R. E. Runstein “Modern recording techniques”, Focal Press 2010			

Subject prepared and coordinated by

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