



Development and Implementation of MDTV Curricula (DIMTV)

WP2.2 - Deliverable 2.2.2

Innovating Professional Master in Multimedia and Digital Television Curriculum at “Aleksandër Moisiu” University of Durrës (UAMD)



Table of Contents

1. Introduction	3
1.2. Study program objectives and learning outcomes	3
1.2.1. “Multimedia and Digital Television” Professional Master programme objectives.....	4
1.2.2. Learning Outcomes of “Multimedia and Digital Television” Professional Master programme	5
1.3. Curriculum structure MDTV Professional Master	5



1. Introduction

The process of developing a curriculum for Professional Master in Multimedia and Digital Television (MDTV) at Aleksandër Moisiu University is the result and the main objective of “diMTV” project. This activity and the quality of its result, is important not only for the university and the project but also its importance goes beyond university’s borders and affects the whole country and even the region. Opportunities offered by such a successful implementation will cover all the professional needs in MDTV area.

Faculty of Information Technology currently offers a bachelor study program for MDTV studies. The new PM program will add to the students the necessary knowledge required to have a deeper learning in the field of Multimedia and Digital Television.

Before developing Professional Master Curriculum, it was necessary to revise and restructure the current 1st study cycle curriculum in Multimedia and Digital Television. After all proposals and comments made by EU partners within the consortium, the existing bachelor curriculum was improved and updated according to the market needs (Deliverable 2.1.2). The next phase was the Innovation and Development of Professional Master curriculum. During this project phase, exchange of the experience and knowledge from project EU partners was an important and crucial process in developing the best curriculum for this program. All EU partners contributed based on their field of expertise. University of Tartu, Estonia, put a lot of effort in building and structuring the best program for Image processing module. University of Ljubljana, Slovenia and Technical University of Ostrava, Czech Republic collaborated especially in the development of 3D Animation Module and Production and Postproduction Module.

1.2. Study program objectives and learning outcomes

The main purpose of this study program is to develop and raise the number of specialists in the field of Multimedia and Digital Television. This program is unique due to the reason of being the only one offered in Albania. The main idea behind this program, since the beginning, was to develop a new program with three main profiles within MDTV area. The first deliverable (Deliverable 1.1) of “diMTV” project, puts in focus the urgent need for specialists in three main directions of specialization, within Multimedia and Digital Television field such as:

1. Image processing
2. 3D Animation
3. Production and Postproduction



The first semester will be common for all students where they get the general knowledge on advanced multimedia technologies, multimedia project management, and courses associated well with projects in groups or individual by using the new established high quality laboratories and studio. In the second semester, the students will have to choose one of the specializations based on their preferences.

The specific profile chosen by the students will be mentioned in their Diploma as follows:

1. For Image processing profile: **Professional Master in “Multimedia and Digital Television”**, specialized in **Image Processing**.
2. For 3D Animation profile: **Professional Master in “Multimedia and Digital Television”**, specialized in **3D Animation**.
3. For the Production and Postproduction profile: **Professional Master in “Multimedia and Digital Television”**, specialized in **Production and Postproduction**.

1.2.1. “Multimedia and Digital Television” Professional Master programme objectives

This study program will provide in-depth theoretical and practical knowledge such as:

- advanced technical knowledge in specific multimedia fields like Image processing, 3D Animation, Production and Post Production.
- through most relevant practices, student will be able and qualified to solve and deal with specific problems in the field. At the same time, they will be able to contribute for future innovations.
- students will acquire technical expertise through the use of Multimedia Laboratory.
- students will have capability and expertise in designing and developing advanced, professional and effective multimedia products, especially in audio-visual media.
- students through practice and up to date knowledge will be able to develop advanced 3D Animation Multimedia products.
- the program will provide for students the possibility to acquire expertise in the field of image and signal processing.



1.2.2. Learning Outcomes of “Multimedia and Digital Television” Professional Master programme

At the end of the studies, the students will be able to:

- apply the right methods and technologies for the purpose of analysing, designing, realizing and managing multimedia products
- have evaluation capabilities for practical cases in the field of multimedia.
- design user interfaces for different digital platforms.
- apply technical principles for designing and developing interactive multimedia products.
- implement advanced techniques in the process of production and postproduction of audio and visual products.
- solve problems, transmitting the right knowledge and producing innovative ideas in the field of Multimedia and Digital Television.

1.3. Curriculum structure MDTV Professional Master

This study program is a professional master program. In order to have a proper structure and a successful and internationally accepted one, the following regulations had to be taken into consideration:

1. State Law 80/2015 for Higher Education in Albania;
2. VKM (Council of Ministers Decision) Nr. 41, 24.01.2018 “For the elements of study programs offered by Higher Education Institutions”;
3. Statute and Regulation of “Aleksandër Moisiu” University.
4. Bologna Card Rules

Based on the Albanian law for Higher Education a professional master program must have 60 credits in total and the programme lasts for one academic year. An academic year has two semesters, each with thirty credits. The lectures can be organized as modules (by giving the course in a short but intensive period) or during a normal semester for sixteen weeks. According to Aleksandër Moisiu University regulation and based on Bologna System rules, a student must follow the course during its 16 weeks of lecturing. Each lecture has three hours in total/week.

The structure of the new study program includes 10 courses (six credits each). All the courses are part of one of the following disciplines.



The structure of the study program includes:

- i. *Fundamental courses (compulsory);*
- ii. *Characterizing courses;*
- iii. *Similar and/or integrated with characterizing courses;*
- iv. *Elective courses;*
- v. *Foreign language learning, practical training courses;*
- vi. *Final Exam/Project*

The philosophy of the program is to teach students through practice and this the reason why most of the subject's syllabi is focused on practice usage. Students will be able to practice in the new PC laboratory and Audio-Video Studio, established by means of "diMTV" project.

The main objective of the curriculum is to teach in the first semester general topics and knowledge related to the field that will be a basis for the second semester that students will have to choose based on their preferences. Thus, all the courses in the first semester are common for all the students. After successfully finishing all the obligations in the first semester, the students will choose one of the following modules (Tables 1, 2 & 3). Each curriculum has 7 compulsory and 3 elective courses (out of 6 offered ones).

Table 1. Image Processing Module			
Category	Course Name		ECTS
A - Basic Courses (5%-10%)	1	Mathematics for Multimedia	6
	Total A		6
B - Characterizing Courses (30% - 40%)	1	Digital Signal Processing	6
	2	Advanced Technologies in Multimedia	6
	3	Multimedia Laboratory	6
	4	Seminar in Multimedia	6
	Total B		24
C - Interdisciplinary / Integrating Courses (20%-30%)	1	Biometric Systems	6
		Signal and Systems	
	2	Computational Geometry	6
		Virtual Reality	
	3	Machine Learning and Applications	6
		Computer Vision	
Total C		18	
D - Complementary Courses (10%)	1	Project Management	6
	Total D		6
E - Graduating courses (10%- 20%)	1	Final Exam/Project	6
	Total E		6



Table 2. 3D Animation Module			
Category	Course Name		ECTS
A - Basic Courses (5% - 10%)	1	Mathematics for Multimedia	6
	Total A		6
B - Characterizing Courses (30% - 40%)	1	Animation of Elements	6
	2	Advanced Technologies in Multimedia	6
	3	Multimedia Laboratory	6
	4	Seminar in Multimedia	6
	Total B		24
C- Interdisciplinary Courses / Integrating (20% - 30%)	1	Advanced 2D Animation	6
		Composition Techniques	
	2	Advanced 3D Animation	6
		Motion Graphics	
	3	Character Animation	6
		Visual Effects	
Total C		18	
D - Complementary Courses (10%)	1	Project Management	6
	Total D		6
E - Graduating courses (10% - 20%)	1	Final Exam/Project	6
	Total E		6



Table 3. Production and Postproduction Module

Category	Course Name		ECTS
A - Basic Courses (5% - 10%)	1	Mathematics for Multimedia	6
	Total A		6
B - Characterizing Courses (30% - 40%)	1	Film and Media Production	6
	2	Advanced Technologies in Multimedia	6
	3	Multimedia Laboratory	6
	4	Seminar in Multimedia	6
	Total B		24
C - Interdisciplinary Courses / Integrating (20% - 30%)	1	Visual Effects	6
		Color Correction and Color Editing	
	2	Audio Editing and Mastering	6
		3D Sound in Multimedia	
	3	Multimedia Content Compression, Synchronization and Delivery	6
		Advanced Video Editing	
Total C		18	
D - Complementary Courses (10%)	1	Project Management	6
	Total D		6
E - Graduating courses (10%- 20%)	1	Final Exam/Project	6
	Total E		6