



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze Umanistiche		
ACADEMIC YEAR	2022/2023		
BACHELOR'S DEGREE (BSC)	DISCIPLINE DELLE ARTI, DELLA MUSICA E DELLO SPETTACOLO		
SUBJECT	HUMANISTIC COMPUTER SCIENCE		
TYPE OF EDUCATIONAL ACTIVITY	C		
AMBIT	10645-Attività formative affini o integrative		
CODE	22717		
SCIENTIFIC SECTOR(S)	ING-INF/05		
HEAD PROFESSOR(S)	MAZZOLA GIUSEPPE	Ricercatore a tempo determinato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	12		
INDIVIDUAL STUDY (Hrs)	240		
COURSE ACTIVITY (Hrs)	60		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	2		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Not mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	MAZZOLA GIUSEPPE Wednesday 10:00 - 13:00 Ex Dipartimento di Ingegneria Informatica, edificio 6, terzo piano		

DOCENTE: Prof. GIUSEPPE MAZZOLA

PREREQUISITES	Basic computer skills.
LEARNING OUTCOMES	<p>KNOWLEDGE AND UNDERSTANDING The student will acquire knowledge and methodologies to define, address, and solve problems related to the production and enjoyment of digital audio content. The student will be able to select and evaluate algorithms and fundamental data structures.</p> <p>The course includes class lectures and exercises, analysis, and discussion of simple applications and case studies. For the verification of this objective, the final test consists of an interview on the course topics and the presentation of an essay.</p> <p>ABILITY TO APPLY KNOWLEDGE AND UNDERSTANDING The student will be able to apply the acquired knowledge to the use of methods and techniques for the representation and use of digital audio. He/she will also learn how to relate the market realities concerning devices, processes, and applications of the sector. The course includes theoretical and computer exercises (individual and in a group) and the preparation of an essay. For the verification of this objective, the test consists of the discussion of an essay.</p> <p>AUTONOMY OF JUDGEMENT Through the methodological approach acquired during the course, the student will gain the ability to use and integrate the learned tools in different application areas. He/she will be able to face new problems and propose solutions even in the presence of limited and incomplete data, integrating the knowledge acquired during the course, and will be able to analyze the merits and defects of the proposed solutions. The course includes class lectures, theoretical and computer exercises (individual and group), the preparation of an essay. For the verification of this objective, the exam includes an interview on the topics of the lectures and the discussion of an essay.</p> <p>COMMUNICATION SKILLS The student will be able to work in a group to communicate with competence and language properties problems of digital audio processing, structuring, and management, even in specialized contexts. He/she will be able to interact with designers and technicians for the realization of systems for the production and use of digital audio. The course includes individual and group lectures and exercises. The exam consists of the final interview on the lecture topics; the discussion of an essay.</p> <p>LEARNING ABILITY The student will be able to face the problems related to the production and enjoyment of digital audio content. The course includes individual and group exercises. For the verification of this objective, the test consists of the discussion of an essay.</p>
ASSESSMENT METHODS	<p>The assessment of learning (final examination) is subdivided into two phases: 1) Presentation of an essay; 2) Oral test.</p> <p>The essay prepared by the student consists of a project for the management of digital video and audio. It aims to ascertain the possession of the skills and abilities to apply knowledge and understanding of the methods and systems studied during the course. The oral test consists of an interview on the topics of the course.</p> <p>The result of the assessment of learning is a score in 30/30. The evaluation modalities will be the same for attending and non-attending students</p>
EDUCATIONAL OBJECTIVES	<p>The course aims to provide the main notions regarding the methodologies of representation and processing of multimedia content, such as sounds, images and videos. The main opensource software to support the professions of the arts, music and entertainment will be analyzed. The course will be articulated alternating as much as possible moments of exercises to lectures.</p> <p>The exercises will be aimed at putting into practice what has been discussed at the theoretical level and will be a basis for the realization of a final work that will assess the skills acquired.</p>
TEACHING METHODS	Class lectures. Computer exercises. Development of simple application projects. The program will be the same for attending and non-attending students.
SUGGESTED BIBLIOGRAPHY	M. De Santo, F. Colace, P. Napolitano: "Informatica per le arti visive, la musica e lo spettacolo", McGraw-Hill, 2012. Altro materiale didattico reso disponibile dal docente sul sito del corso.

SYLLABUS

Hrs	Frontal teaching
3	Digital representation of information
5	Digital Representation of Images. Resolution. Bit rate.
5	Rappresentazione digitale del video. Tecniche per il montaggio e la produzione video. Esempi di DVE.
5	Digital representation of sounds. Representation formats. Physical and psychophysical characteristics of sound.

SYLLABUS

Hrs	Frontal teaching
9	Basics on digital photography

Hrs	Practice
9	Exercises with the GIMP software
9	Exercises with Digital Video Editing software(Openshot)
9	Exercises with the Audacity software
6	Exercises on photo composition and processing