

Recording Studio - Professional Training
Environmental AcousticsAUDIO-LIGHTING TECHNICIAN COURSE FOR THE
PERFORMING ARTS

SOUND PHYSICS

AUDIO HARDWARE AND SOFTWARE IN LIVE EVENTS

a set list and performance of the show

- Acoustics and Psychoacoustics
 - Cables and connections
 - Equalizers, Compressors, Effects
 - Microphones and Microphone Techniques
 - Analog and digital mixers
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ELECTRONICS AND ELECTRICAL ENGINEERING

- OHM's law
 - Fundamentals of electronics and electrical engineering
 - Voltage - Current - Resistance
 - Using the tester
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PHYSICS OF LIGHT - LIGHTING TECHNOLOGY

- Fundamentals of Lighting Technology
 - Reflections and refractions
 - Reflectance and absorption of surfaces
 - Photometric quantities
 - Vision process
 - Physiology of the eye and visual perception
 - Characteristics of light sources
 - RGB - CMY
 - Colour temperature and colour rendering
 - Nature of Light
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THEATRICAL ARCHITECTURE - LIGHT IN SPECTACLE,
FROM DIRECTION TO STAGING

- Scenic space
- Elements of stagecraft
- The performance - Analysis of the staging
- Analysis of scenographic sketches - The text
- Technical choices (timing, checks, artistic choices, programming and direction), creation of

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- Software and Sequencers
 - Mixing
 - Amplification Systems
 - Speakers and crossovers
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- Plant safety standards
 - Electrical distribution and protection switches
 - Electrical wiring at voltages 220V, 380V
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- Type of lamps
 - Equipment and Dimmers
 - Knowledge and operation of analogue consoles
 - Typology and characteristics of traditional luminaires
 - Simple effects (jellies, colour filters and diffusers) and complex effects (gobos, projection of moving effects, backdrops, etc.).
 - Criteria for choosing light sources and luminaires
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- Backdrop lighting
 - Aiming and adjusting luminaires
 - The paper light-plane
 - Installation and wiring of the lighting plan of a live concert or theatrical performance

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**NEW TECHNOLOGIES AND CONTROL SYSTEMS -
DESIGN AND SIMULATION**

- Technologies and data transmission (DMX protocol, Ethernet, LAN networks)
 - Intelligent lights (scanners, moving heads, cyclorama), and LEDs.
 - Simple projector patching with addresses multiple (colour changers, discharges, dampers etc)
 - Special effects (smoke, rain, lightning, black light, etc.)
 - Knowledge and management of digital consoles and related software
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PRACTICAL APPLICATION

- Managing a lighting project
 - Electrical wiring from supply to distribution on stage
 - Installation of lighting fixtures and their safety
 - Side cuts, cages, slingbacks and fronts
 - Assembly of aluminium trusses (American) and interpretation of capacity data sheets
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- Equipment suspension and securing structures
- Practical plant engineering - Electrical and control connections
- Aiming and adjusting luminaires illuminated on various supports (fixed and mobile)

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