

Comprehensive Curriculum and Course Prospectus: Advanced Online Certificate in Music Production

Program Overview

The Advanced Online Certificate in Music Production is an exhaustive, twenty-four-week (6-month) distance-learning program designed to transition students from foundational musical concepts to elite, professional-grade digital audio production. Hosted entirely online via high-fidelity audio streaming platforms, the curriculum prioritizes intensive practical application within Steinberg's Cubase Pro environment. Students undergo a deep, structured immersion into DAW operation, keyboard-based theory, advanced sound design, intricate recording methodologies, specialized background scoring, complex digital signal processing (mixing and mastering), and music business strategies. The total program fee is 70,000 INR. This syllabus outlines the specific technical requirements, learning outcomes, and weekly module progression required for advanced certification.

About the Instructor: Prashant Katheriya

Prashant Katheriya is a certified Sound Engineer and Acoustic Engineer with 16 years of active industry experience. As the Founder of Estelon Acoustics Private Limited, he operates multiple state-of-the-art recording facilities across Pune, Mumbai, and Delhi. In addition to his acoustic design and engineering background, he is a commercial recording artist maintaining over 300,000 monthly listeners on Spotify. He currently serves as a lead music producer for Sony Music and Saregama. This course allows students to learn directly from a practitioner operating at the highest levels of the Indian commercial music sector.

Online Learning Methodology and Technical Infrastructure

Delivering high-level audio engineering instruction remotely requires specific, low-latency streaming infrastructure. Standard video conferencing compresses audio, rendering it useless for critical studio listening. To solve this, the course utilizes Zoom's High Fidelity Music Mode for visual demonstration, paired with industry-standard remote audio protocols for sound playback. Instructor audio is routed using Audiomovers LISTENTO, a plugin that streams lossless, high-resolution PCM audio directly from the instructor's digital audio workstation to the student's monitoring system. This ensures zero degradation in sound quality during mixing and mastering evaluations. For remote recording and collaborative project analysis, the program uses Steinberg's VST Connect Pro, enabling real-time MIDI and multi-track audio streaming across the internet.

Student Technical Requirements

Because this is a highly technical online program, students must possess a capable home studio setup prior to the commencement of the first module.

Category	Minimum Requirement Specification
Operating System	64-bit Windows 10/11 or macOS (Big Sur 11.0 or newer).
Processor	Intel Core i5/i7 (Quad-core or higher), AMD Ryzen, or Apple Silicon (M1/M2/M3).
RAM	8 GB minimum; 16 GB highly recommended for sample libraries.
Storage	256 GB SSD minimum; 500 GB+ NVMe SSD recommended, with at least 70-100 GB of free space.
Primary Software	Steinberg Cubase Pro
Audio Interface	A USB class-compliant 2-input/2-output audio interface (e.g., Focusrite Scarlett, Universal Audio Volt).
Monitoring	Studio-grade closed-back headphones (e.g., Audio-Technica ATH-M50x, Beyerdynamic DT 770 Pro).
Microphone	A large diaphragm condenser microphone (or a dynamic mic like the Shure SM58) with an XLR cable and stand.
MIDI Controller	A 25-key minimum USB MIDI keyboard controller.
Internet	A stable broadband or fiber-optic connection capable of sustaining real-time lossless audio streams.

Course Architecture

Structural Component	Specification Details
Total Course Duration	6 Months (24 Weeks)
Standard Session Frequency	2 Classes Per Week
Standard Monthly Classes	8 Classes Per Month
Remedial Session Allowance	Up to 2 Extra Classes Per Month (for troubleshooting/review)
Total Course Contact Hours	48 to 60 Hours
Class Duration	1 Hour per session
Total Course Fee	70,000 INR

Detailed Course Curriculum

Module 1: DAW Architecture and Digital Audio Foundations

Module 1 establishes strict operational fluency within Steinberg's Cubase Pro. Students learn to

navigate the interface, optimize system performance, and manage project files to professional studio standards.

- **System Setup & Optimization:** Students configure audio interface drivers, manage buffer sizes, and mitigate latency during live tracking. Includes functional analysis of sample rates (44.1kHz vs. 48kHz) and bit depth (24-bit vs. 32-bit float).
- **Cubase Operation:** Comprehensive training on the Project window, Inspector panel, MixConsole, and Transport controls.
- **Data Management:** Implementing strict directory hierarchies for Cubase project folders to prevent file loss and missing audio errors.
- **Audio & MIDI Editing:** Introduction to the Key Editor. Students execute manual MIDI drawing, quantization, and velocity programming. Audio editing covers importing stems, utilizing slicing tools, and applying micro-crossfades to prevent digital clipping.

Module 2: Applied Music Theory and Keyboard-Based Arrangement

This module bridges traditional music theory with digital MIDI programming. Using a MIDI keyboard controller, students translate theoretical concepts into practical musical arrangements.

- **Rhythmic Foundations:** Analysis of standard note values (whole, half, quarter, eighth). Application of rhythm via finger drumming to establish timing and groove using virtual drum instruments.
- **Scale Construction:** Deconstruction of whole-step and half-step formulas for major and natural minor scales. Analysis of their respective emotional contexts in commercial music.
- **Harmonic Architecture:** Building major and minor triads from root, third, and fifth intervals.
- **Voice Leading:** Application of first and second chord inversions to generate smooth harmonic progressions and avoid disjointed MIDI programming.
- **Practical Arrangement:** Students program foundational diatonic chord progressions and write counter-melodies, focusing on standard pop, electronic, and cinematic music structures.

Module 3: Advanced Sound Design and Synthesis

Moving beyond basic presets, students will learn to craft unique, signature sounds from scratch, a critical skill for modern electronic music production and bespoke background scoring.

- **Synthesis Architecture:** Deep-dive analysis of wavetable, subtractive, and frequency modulation (FM) synthesis.
- **Modular Integration:** Creating signature sounds by routing and patching within modular synths and complex plugin environments.
- **Advanced Sampling:** Utilizing tools like Sampler and Simpler to manipulate audio, including audio warping, time-stretching, groove extraction, and pitch manipulation.
- **Layering and Texture:** Building massive synth leads, evolving cinematic pads, and heavy sub-bass patches through strategic instrument layering and custom modulation routings.

Module 4: Professional Recording Methodologies and Microphone Techniques

Understanding the precise pathway an audio signal travels—from a physical sound source,

through hardware, and into the digital realm—is a prerequisite for professional production. This module expands significantly into complex multi-instrument setups.

- **Acoustics and Microphone Theory:** Technical comparison of dynamic, condenser, and ribbon microphones.
- **Stereo Recording Applications:** Executing advanced stereo microphone techniques (such as XY, ORTF, and Mid-Side configurations) for capturing acoustic guitars, pianos, and room ambiance.
- **Multi-Mic Drum Setups:** Specialized techniques for miking a full acoustic drum kit, managing phase relationships, and bleeding between microphones.
- **Combo and Dual Instrument Recording:** Protocols for simultaneously tracking multiple musicians (e.g., a vocalist and an acoustic guitarist) while maintaining maximum isolation.
- **Vocal Production Workflow:** Advanced editing and comping techniques, managing the proximity effect, deploying pop filters, and establishing a professional vocal tracking chain.

Module 5: Audio Post-Production and Background Music Scoring

This highly specialized module prepares producers for the lucrative fields of film scoring, television, and commercial media production.

- **Scoring to Picture:** Setting up Cubase for video playback, understanding frame rates, and utilizing tempo tracks/arranger tools for cinematic transitions and dynamic scene builds.
- **Dialogue and ADR:** The fundamentals of dialogue editing, sync sound, and Automated Dialogue Replacement (ADR) workflows.
- **Foley and SFX:** Creating, recording, and integrating custom sound effects to build immersive auditory environments for visual media.
- **Spatial Audio Foundations:** An introduction to multi-channel formatting, including film mixing concepts for 5.1, 7.1, and Dolby Atmos integration.
- **Commercial Applications:** Jingle creation, voiceover processing, and dedicated background score production techniques.

Module 6: Advanced Mixing Engineering

Mixing balances individual tracks into a cohesive sonic whole. This module progresses far beyond the basics, introducing the complex routing and processing techniques used by top-tier mix engineers.

- **Advanced Gain Staging and Panning:** Managing digital headroom for large-track-count projects. Creating depth using advanced panning laws and the stereo field.
- **Complex Equalization:** Surgical subtractive EQ, dynamic EQ applications, and Mid/Side equalization to carve out space and widen the stereo image without introducing phase issues.
- **Dynamic Range Control:** In-depth breakdown of VCA, FET, and Opto compression emulations. Executing sidechain compression for groove, and multiband compression for tonal control.
- **Parallel Processing:** Utilizing Cubase's Control Room, sends, groups, and inserts to set up parallel compression (New York compression) on drum busses and parallel saturation for vocal thickness.
- **Layered Mixing:** Strategies for executing layered mixing techniques to ensure dense arrangements remain transparent and punchy.

Module 7: Audio Mastering and Loudness Normalization

Mastering provides the final commercial polish, ensuring tracks translate perfectly across all playback systems.

- **The Mastering Chain:** Configuring an advanced master bus chain utilizing linear-phase EQ, subtle bus compression, multi-band harmonic excitation, and stereo widening.
- **Brickwall Limiting and Loudness:** Safely pushing the volume of the track to achieve commercial loudness without destroying transient punch.
- **Loudness Standards:** Reading LUFS (Loudness Units relative to Full Scale) and True Peak meters to meet strict loudness normalization standards required by Spotify, Apple Music, and broadcast television.
- **Export and Dithering:** Understanding sample rate conversion and the mathematical necessity of applying dither when exporting high-resolution studio projects for final commercial distribution.

Module 8: Music Business, Digital Distribution, and Marketing Strategy

The final module equips graduates with the entrepreneurial infrastructure required to monetize their newly acquired production skills in the modern music industry.

- **Release Preparation:** Formatting master WAV files to exact specifications. Generating ISRC codes, managing metadata, calculating royalty splits, and sourcing cover artwork.
- **Digital Aggregators:** Comparative analysis of distribution platforms and their respective royalty payout models for uploading to major streaming networks.
- **Platform Optimization:** Claiming and verifying the 'Spotify for Artists' profile. Pitching unreleased material directly to editorial curation teams.
- **Digital Marketing Tactics:** Utilizing the "Content Butchery" method to scale short-form video content from a single anchor asset. Establishing a micro-budget advertising strategy via Meta Ads Manager to generate initial streaming momentum.

Expected Graduate Learning Outcomes

Upon successful completion of the Advanced Online Certificate in Music Production, graduates will possess the capabilities to:

1. **Configure Complex Systems:** Design and troubleshoot a functional home recording studio integrating computer hardware, audio interfaces, and extensive MIDI networks.
2. **Operate Professional Software:** Demonstrate expert-level command of Steinberg's Cubase Pro for MIDI sequencing, advanced audio editing, and multitrack project management.
3. **Execute Advanced Sound Design:** Synthesize original tones using wavetable and modular software instruments, and deploy intricate sampling techniques for genre-specific production.
4. **Capture Pristine Audio:** Route analog/digital signals correctly, select appropriate microphones, and execute complex multi-mic and stereo tracking setups for drums, acoustic instruments, and vocals.
5. **Produce Media Audio:** Score to visual media, execute dialogue editing, and prepare

audio for film, commercial jingles, and multi-channel surround environments.

6. **Mix and Master to Elite Standards:** Apply layered mixing, parallel processing, Mid/Side equalization, and professional mastering chains to meet global LUFS streaming standards.
7. **Distribute and Market Independently:** Prepare finalized audio assets for digital distribution and execute comprehensive marketing campaigns to build a commercial brand.