

# **Comprehensive Curriculum and Course Prospectus: Online Certificate in Music Production**

## **Program Overview**

The Online Certificate in Music Production is a rigorous, twelve-week distance-learning program designed to transition students from foundational musical concepts to professional-grade digital audio production. Hosted entirely online via high-fidelity audio streaming platforms, the curriculum prioritizes practical, commercial application within Steinberg's Cubase Pro environment. Students undergo structured training in DAW operation, keyboard-based theory, home studio acoustics, recording techniques, digital signal processing (mixing and mastering), and music business strategies. The total program fee is 45,000 INR. This syllabus outlines the specific technical requirements, learning outcomes, and weekly module progression required for 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
<b>Operating System</b>	64-bit Windows 10/11 or macOS (Big Sur 11.0 or newer).
<b>Processor</b>	Intel Core i5/i7 (Quad-core or higher), AMD Ryzen, or Apple Silicon (M1/M2/M3).
<b>RAM</b>	8 GB minimum; 16 GB highly recommended for sample libraries.
<b>Storage</b>	256 GB SSD minimum; 500 GB+ NVMe SSD recommended, with at least 70-100 GB of free space.
<b>Primary Software</b>	Steinberg Cubase Pro
<b>Audio Interface</b>	A USB class-compliant 2-input/2-output audio interface (e.g., Focusrite Scarlett, Universal Audio Volt).
<b>Monitoring</b>	Studio-grade closed-back headphones (e.g., Audio-Technica ATH-M50x, Beyerdynamic DT 770 Pro).
<b>Microphone</b>	A large diaphragm condenser microphone (or a dynamic mic like the Shure SM58) with an XLR cable and stand.
<b>MIDI Controller</b>	A 25-key minimum USB MIDI keyboard controller.
<b>Internet</b>	A stable broadband or fiber-optic connection capable of sustaining real-time lossless audio streams.

## Course Architecture

Structural Component	Specification Details
<b>Total Course Duration</b>	3 Months (12 Weeks)
<b>Standard Session Frequency</b>	2 Classes Per Week
<b>Standard Monthly Classes</b>	8 Classes Per Month
<b>Remedial Session Allowance</b>	Up to 2 Extra Classes Per Month (for troubleshooting/review)
<b>Total Course Contact Hours</b>	24 to 30 Hours
<b>Class Duration</b>	1 Hour per session
<b>Total Course Fee</b>	45,000 INR

## Detailed Course Curriculum

### Module 1: Foundations of Digital Audio and Cubase Pro Architecture

A digital audio workstation (DAW) is the primary tool for modern audio engineering. 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 during playback.

## 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 and electronic music structures.

## Module 3: Home Studio Acoustics, Recording Techniques, and Signal Flow

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.

- **Acoustics and Microphone Theory:** Technical comparison of dynamic and condenser microphones. Application of cardioid, omnidirectional, and figure-8 polar patterns for recording in untreated home studio environments.
- **Analog Gain Staging:** Establishing optimal input gain levels at the preamplifier. Focus on maximizing the signal-to-noise ratio while strictly avoiding analog-to-digital clipping.
- **Digital Routing:** Tracing audio pathways from physical hardware inputs to Cubase Input Channels, Audio Channels, Group Channels (busses), and the master Stereo Output.
- **Vocal Production Workflow:** Managing the proximity effect, deploying pop filters, and establishing a professional vocal tracking chain. Students utilize Cubase's track lane system to record, comp, and edit composite master vocal takes.

## Module 4: Virtual Studio Technology (VST) Ecosystems and

## Management

Navigating the technical management of third-party software plugins is essential to prevent workflow interruptions and system crashes.

- **Plugin Formats:** Technical distinctions between legacy VST2 (.dll) and current VST3 architectures.
- **Directory Management:** Establishing strict Windows and macOS file management protocols for VST installations to ensure accurate DAW scanning and initialization.
- **Licensing Systems:** Operating complex authorization managers such as iLok, Native Access, and Waves Central. Troubleshooting common authorization failures.
- **The Producer Toolkit:** A functional overview of industry-standard processing tools, including wavetable synthesizers, algorithmic reverbs, and dynamic equalizers utilized in contemporary production.

## Module 5: Audio Processing, Mixing, and Mastering Fundamentals

Mixing balances individual tracks into a cohesive sonic whole, while mastering provides the final commercial polish. This module focuses heavily on the foundational tools of digital signal processing.

- **Volume and Panning:** Establishing a static mix using fader balance. Managing digital headroom to ensure the stereo bus remains below 0 dBFS. Utilizing the stereo field for instrument separation while anchoring low-frequency elements in mono.
- **Subtractive Equalization:** Identifying and eliminating resonant frequencies and rumble. Utilizing EQ to resolve frequency masking and carve out acoustic space for lead instruments.
- **Dynamic Range Compression:** Mathematical breakdown of Threshold, Ratio, Attack, and Release parameters. Applying compression to control transient peaks and add cohesiveness to vocal and drum busses.
- **Mastering Protocol:** Configuring a master bus chain utilizing subtle compression, tonal balancing, and brickwall limiting. Reading LUFS meters to hit strict loudness normalization standards required by major streaming platforms.

## Module 6: Music Business, Digital Distribution, and Marketing Strategy (Bonus)

The final module addresses the business infrastructure required for independent artists. Students learn the protocols for digital distribution, metadata management, and targeted digital marketing campaigns.

- **Release Preparation:** Formatting master WAV files to exact specifications. Generating ISRC codes, managing metadata, calculating royalty splits, and sourcing 3000x3000px cover artwork.
- **Digital Aggregators:** Comparative analysis of distribution platforms (e.g., DistroKid, TuneCore, SoundOn) and their respective royalty payout models for uploading to Spotify, Apple Music, and Amazon Music.
- **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 the Meta Ads Manager to generate initial streaming momentum.

## Expected Graduate Learning Outcomes

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

1. **Configure and Troubleshoot:** Design a functional home recording studio integrating computer hardware, audio interfaces, and MIDI controllers.
2. **Operate Professional Software:** Demonstrate professional-level operation of Steinberg's Cubase Pro for MIDI sequencing, audio editing, and multitrack project management.
3. **Apply Musical Theory:** Utilize a keyboard controller to construct scales, program rhythms, design chord progressions, and arrange musically cohesive compositions.
4. **Execute Recording and Signal Flow:** Route analog and digital audio signals correctly, select appropriate microphones, and manage preamplifier gain staging to capture pristine recordings.
5. **Mix and Master to Commercial Standards:** Balance audio tracks using volume, panning, subtractive equalization, and dynamic compression, while applying final brickwall limiting to meet modern LUFS streaming standards.
6. **Distribute and Market Independently:** Prepare finalized audio assets for global digital distribution and execute foundational digital marketing campaigns using modern social media and aggregator tools.