

Pro Tools Music Professional Certification

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Pro Tools Music Professional Certification comprises two courses — the *Pro Tools 201* and *Pro Tools 210M* courses. Below you can view a detailed table of contents for these two courses.

Pro Tools Production I (PT201)

Lesson 01: Understanding Pro Tools Hardware Systems

Summary: In this lesson, you will learn about the basic components of a Pro Tools | HDX system and Pro Tools | Carbon system along with some of the available hardware options. It also provides information on setting up your hardware and software for optimal performance.

- Overview of Pro Tools Systems
- Components of a Pro Tools | HDX System
 - Optional Components
 - Avid Audio Interfaces
- Components of a Pro Tools | Carbon System
- Hardware Setup
- Playback Engine Settings
- HDX Hybrid Engine
 - How the Hybrid Engine Works
- Understanding the Pro Tools Mixer
 - Floating Point Processing
- System Usage
- Lesson 1 Review & Knowledge Check

Exercise 1: Optimizing Your System

- View System Resource Usage
- Balance System Resources

Lesson 2: Customizing Pro Tools

Summary: This lesson provides information on customizing the appearance and functionality of your Pro Tools software. By matching your software to your specific hardware, the needs of your projects, and your working preferences, you will be able to work more efficiently and professionally.

- Pro Tools Display and Operation Preferences
 - Display Preferences
 - Operation Preferences
- I/O Setup
 - I/O Setup Features
 - I/O Setup Options
 - Creating and Editing Paths
 - Importing and Exporting I/O Settings
- Color-Coding
 - Applying Custom Colors to Tracks and Clips
 - Applying Marker Colors
- Custom Keyboard Shortcuts
 - Keyboard Shortcuts Window
 - Assigning Keyboard Shortcuts
 - Resetting Custom Assignments
 - Conflicting Assignments
 - Exporting Keyboard Shortcuts
- Working with Window Configurations
 - Creating a Window Configuration
 - Using the Window Configuration List
 - Recalling Window Configurations
 - Updating Window Configurations
 - Storing Window Configurations in Memory Locations
- Scrolling and Navigation Options
 - Edit Window Scrolling Options
 - Scrolling to a Track in the Mix and Edit Windows
 - Navigation and Playback Techniques
- Lesson 2 Review & Knowledge Check

Exercise 2: Customize Your Settings

- Configure Display and Operation Preferences
- Configure the I/O Setup
- Color-coding
- Assign Custom Keyboard Shortcuts
- Creating Window Configurations
- Edit Window Scrolling

Lesson 3: Session Management

Summary: This lesson provides information on configuring your Pro Tools session for various common workflows. The techniques discussed in this lesson will help you allocate resources and customize settings for working with large sessions using Pro Tools Ultimate software. You will learn how to configure disk allocation, explore how to use Workspace browsers, how to customize searches, how to pause and resume background tasks, and how to quickly locate and relink missing files.

- Disk Allocation
 - Changing Disk Allocation for Existing Tracks
 - Selecting Disk Allocation Options for New Tracks
 - Reallocating Tracks
- Status Indicators
 - Data Online Indicators
 - Delay Compensation Indicator
 - Sync Status Indicators
 - Mono, Stereo, and Surround Tracks
- Managing Media with Workspace Browsers
- Using Workspace Browsers
 - Searching Items
 - Workspace Browser Pop-Up Menu
 - Workspace Right-Click Menu
 - Customizing the Workspace Browser Display
 - Tagging Files
 - Indexing Volumes
 - Importing Files from Sound Libraries and Catalogs
- Sessions with Missing Files
 - Opening Sessions with Missing Files
 - Relinking Missing Files in an Open Session
 - Relink Window
- Using the Task Manager
 - Task Manager Window
 - Pausing, Resuming and Canceling Tasks

- Failed Tasks
- Lesson 3 Review & Knowledge Check

Exercise 3: Managing your Session

- Relink Missing Files
- Use a Workspace Browser to Find Files
- Import Files from a Browser

Lesson 4: Track Management

Summary: This lesson covers techniques you can use to organize and manage your tracks. You will also learn how to quickly duplicate tracks, track processing, and explore options for collaborating with others.

- Voice Allocation
 - Track Priority
 - Making Tracks Inactive
- Making Track Assignments
 - Cascading Assignments
 - Using Type-Ahead Search
- Duplicating Tracks
 - Using Duplicate Tracks
 - Using Commit Tracks
- Sharing Tracks for Collaboration
 - Exporting Tracks for Editing or Additional Recording
 - Export Selected Tracks as a New Session
 - Using Cloud Collaboration to Share Tracks
 - Using Track Bounce to Export Tracks as Audio Files
- Using Track Presets
 - Creating Tracks from a Track Preset
 - Saving a Track Preset
 - Using Track Markers
 - Track Marker Controls
 - Track Marker Views
 - Editing with Track Markers
 - Marker Follows Edit (MFE)
- Group Attributes
 - Global Attributes
 - Modifying Attributes
 - Group Attribute Presets
- Working with Groups

- Enabling and Disabling Groups
- Selecting Members of a Group
- Showing/Hiding Members of a Group
- Suspending and Isolating Group Functions
- Lesson 4 Review & Knowledge Check

Exercise 4: Setting up your Tracks

- Making Track Assignments
- Commit Tracks
- Create a Track Preset
- Add Track Markers
- Create Groups
- Export Selected Tracks as a New Session

Lesson 5: Selection Techniques

Summary: This lesson focuses on various ways to create and store selections within Pro Tools. You will learn how to select precise areas in your session, audition portions of your selections, and store your selections to use them to their greatest effect.

Your editing speed depends heavily on how quickly and accurately you can create proper selections. You will need to be familiar with many different types of selections in order to find the best approach for a given situation.

- Creating Selections
 - Timeline Selections
 - Edit Selections
 - Working with Timeline and Edit Selections
 - Additional Selection Techniques
- Auditioning Selections
 - Shuttle Mode with the Scrubber
 - Changing How the Scrubber Tool Affects Selections
 - Making Selections with the Scrubber Tool
- Auditioning the Start and End of a Selection
 - Pre-Roll and Post-Roll Audition
 - Auditioning with Edit Keyboard Focus Mode Shortcuts
- Storing Selections in Memory Locations
 - Memory Location Properties
 - Working with Selection-Based Memory Locations
- Lesson 5 Review & Knowledge Check

Exercise 5: Working with Selections

- Create a Basic Selection
 - Audition the Selection
 - Save the Selection
- Finishing Up

Lesson 6: Editing Techniques

Summary: This lesson covers a wide selection of editing techniques. You will learn how to use advanced tools and functions in Pro Tools to affect the timing, alignment, and quality of your audio. These processes can be used to achieve effects ranging from subtle fine-tuning to dramatic re-composition of your tracks.

- Editing Preferences
- Alternate Tools and Tool Functions
 - Alternate Zoomer Tool Functions
 - Alternate Trim Tool Functions
 - Alternate Selector Tool Functions
 - Alternate Grabber Tool Functions
 - Smart Tool Functions (Recap)
- Nudging, Shifting, and Duplicating
 - Nudging Audio Clips
 - Nudging Edit Selections
 - Trimming with Nudge
 - Nudging a Clip's Contents
 - Using the Shift Command
 - Extending a Selection while Duplicating
- Editing within Folder Tracks
 - Edit Operations on Open Folder Tracks
 - Edit Operations on Closed Folder Tracks
- Clip Editing Techniques
 - Using Strip Silence
 - Configuring Auto Fades (Pro Tools Ultimate Only)
 - Applying Batch Fades
 - Using Fade Presets
 - Adjusting Fade Boundaries
- Clip Alignment Techniques
 - Creating Sync Points
 - Spotting to Sync Points
 - Aligning a Clip's Start (Snap to Head)
 - Aligning a Clip's End (Snap to Tail)
 - Aligning a Clip's Sync Point (Snap to Sync Point)

- Snapping Clips to Previous and Next Clips
- Lesson 6 Review & Knowledge Check

Exercise 6: Editing Session Media

- Loop Trim Tool
- Separation Grabber
- Object Grabber
- Nudging Clips
- Using Strip Silence
- Syncing Clips
 - Save the Selection
- Finishing Up

Lesson 7: Clip-Based Processing

Summary: This lesson covers the clip-based gain and clip-based effects functionality in Pro Tools. You will learn how to use the available display options for clip-based processing, how to apply and modify clip-based functions, and how to render clip-based processing.

Pro Tools provides clip-based gain and clip-based effects for quickly adjusting the attributes of individual clips on your tracks. Clip-based processing is useful for matching the gain and/or character between clips from different sources in a Pro Tools session. It can also be used to modify the envelope or processing of a clip for sound design or other creative purposes.

- Clip Gain Basics
 - Clip Gain Display Options
- Editing Clip Gain
 - Using the Clip Gain Fader
 - Using Edit Tools and Functions
 - Nudging Clip Gain
 - Using Standard Edit Commands for Clip Gain
- Advanced Clip Gain Functions
 - Converting Between Clip Gain and Volume Automation
 - Coalescing Between Clip Gain and Automation
 - Bypassing Clip Gain
 - Rendering Clip Gain
- Using Clip Effects
 - Displaying Clip Effects
 - Applying Clip Effects
 - Clip Effects Status View
- Removing and Rendering Clip Effects

- Bypassing Clip Effects
- Clear Clip Effects
- Rendering Clip Effects
- Lesson 7 Review & Knowledge Check

Exercise 7: Applying Clip-based Processing

- Display Clip Gain
- Adjusting Clip Gain Levels
- Editing Clip Gain
- Converting Clip Gain to Volume Automation
- Using Clip Effects

Lesson 8: Mixing and Plug-In Processing

Summary: This lesson focuses on optimizing the mixing features in Pro Tools Ultimate software and covers topics such as solo modes and behaviors, submixing, plug-in management, sidechain processing, and advanced delay compensation techniques.

- Common Mixing Settings
 - Mixing Preferences
 - Solo Modes: SIP versus AFL/PFL
 - Solo Button Behaviors
 - EQ Curve Display
- Submixing
 - Creating Submixes
 - Bus Interrogation
- Using VCA Master Tracks
 - Creating a VCA–Controlled Group
 - VCA Track Controls
 - Metering on VCA Masters
- Multi-mono Plug-ins
 - Using Multi-Mono Plug-Ins
 - Working with Individual Plug-In Channels
 - Relinking All Channels
- Working with Plug-in Settings
 - Recalling Settings with the Plug-In Librarian Menu
 - Using the Plug-In Settings Menu
 - Plug-In Settings Storage Locations
 - Saving Plug-In Settings
 - Importing, Copying, and Pasting Plug-In Settings
 - Deleting Plug-In Settings

- Selecting and Navigating Plug-In Presets
- Sidechain Processing
 - Using Sidechain Processing
- Delay Compensation
 - Showing Sample Delay
 - Automatic Delay Compensation
 - System Delay
 - Low Latency Monitoring During Recording
 - Delay Compensation for Sidechains
 - Delay Compensation and Hardware Inserts
- Delay Compensation for MIDI
 - MIDI Track Timing Adjustment
 - Offsetting MIDI Tracks
 - Delay Compensation for External Devices
- Lesson 8 Review & Knowledge Check

Exercise 8: Submixing and Processing Tracks

- Mixing Preferences
- Set Up Solo Modes (Optional)
- Submix the Background Vocals
- Create a VCA Master Track
- Using Multi-Mono Plug-ins
- Sidechain Processing
- Delay Compensation

Lesson 9: Automation

Summary: This lesson covers advanced automation concepts that can be applied in Pro Tools. You will learn how to automate mixing parameters and plug-ins and how to edit your automation using special commands and modes.

- Pro Tools Ultimate Automation Modes
 - Automation Modes
 - Touch/Latch Mode Scenario
- Working with Automation
 - Automation Preferences
 - Enabling Automation
 - Viewing Automation while Writing
 - Viewing Multiple Automation Playlists
 - Resizing Automation Lanes
 - Automating Plug-Ins

- Using AutoMatch
 - AutoMatch Time
 - Manual AutoMatch
- Writing Automation over Long Sections
- Editing Automation
 - Automation Follows Edit
 - Special Cut, Copy, Paste, and Clear Commands
 - Trimming Automation with the Trim Tool
 - Constraining New Breakpoints to the Next or Previous Automation Value
- Suspending Automation
 - Globally Suspending Automation
 - Suspending Automation on Tracks
 - Suspending Individual Automation Parameters
- Lesson 9 Review & Knowledge Check

Exercise 9: Automating a Mix

- Configure Automation Preferences
- Enabling Automation
- View Multiple Automation Lanes
- Enabling Plug-in Automation
- Using AutoMatch
- Writing Automation Over a Selection
- Trimming Automation

Lesson 10: Finishing Techniques

Summary: After you finish recording, editing, and creating some basic automation, you are ready for the last stage of your project: fine-tuning the mix and creating the final output. This lesson focuses on mixdown options and techniques.

- Pro Tools Metering Preferences
 - Track Metering Options
 - Peak Hold and Clip Indication
 - Gain Reduction and Send Level Display Options
- Stereo Mixing and Pan Depth
 - Pan Law
 - Stereo Pan Depth Setting
- Creating a Final Mix
 - Mixdown Options
 - Routing Tracks to Multiple Outputs
- Mixdown Techniques

- Bounce Mix
- Recording to Tracks (Internal Layback)
- Recording to an External Device (External Layback)
- Rendering Stems as Stereo Mixes (Stem Layback)
- Lesson 10 Review & Knowledge Check

Exercise 10: Final Mixdown

- Set Metering Preferences
- Display Gain Reduction Meters
- Commit Tracks to Create Stems
- Creating an Internal Layback Mixdown

Pro Tools Production II (Music Production - PT210M)

Lesson 01: Preparing a Session for Music Composition

Summary: This lesson covers the steps required to prepare a session for composing and recording with audio, MIDI, and other music production tools. You will learn how to set up multiple MIDI devices for simultaneous use with Pro Tools, how to customize your session for working with music and beat-making apps, how to beat-match your session to loops or existing audio, and how to reuse track elements and data from other sessions.

- Customizing Sessions with MIDI Setup
 - MIDI Connections to Pro Tools
 - MIDI Studio Setup (Windows Only)
 - Audio MIDI Setup (Mac Only)
- Routing MIDI Signals in Pro Tools
 - Signal Flow Systems
 - MIDI Routing
- Interacting with External Devices
 - Using MIDI Beat Clock
 - Working with Ableton Link
 - Routing Audio from External Devices through Pro Tools
- Working with Complex Song Structures
 - Changing the Song Start
 - Adding Meter Changes
 - Meter and Tempo Changes and the Click
- Matching Session Tempo to an Audio Loop
 - Working with Audio Loops
 - Using Identify Beat
- Reusing Tracks and Session Data
 - Importing Tracks
 - Using Track Presets
 - Modifying a Track Preset
 - Importing Other Reusable Features
- Lesson 1 Review & Knowledge Check

Exercise 1: Session Preparation & Import

- Import Track Data from a Different Session
- Derive Tempo from an Audio Loop

- Set the Song Start Time

Lesson 2: Tracking and Overdubbing

Summary: This lesson covers key recording techniques for the professional studio engineer or recording musician. Using the techniques described in this lesson, students will be able to accommodate a variety of different recording styles, helping to bring out the best performance of the performing musicians.

- Recording Virtual Instruments with MIDI Controllers
 - Assigning MIDI Controls to Plug-in Parameters
 - Recording MIDI CC Data
 - Viewing and Editing Recorded MIDI CC Data
 - Automation versus MIDI CC Graphs
 - When to Record MIDI CC Data versus Automation
 - Converting CC Data to Automation
- Tracking Techniques for MIDI Instruments
 - Using the MIDI Input Filter
 - Converting MIDI Virtual Instrument Recordings to Audio
 - Converting Audio Recordings to MIDI
 - Preference Settings for Recording Audio and MIDI
- Monitoring Mode Options and Preferences
 - Auto Input Monitoring
 - Input Only Monitoring
 - Monitoring Mode Preferences
- QuickPunch and TrackPunch Recording
 - Using QuickPunch
 - Using TrackPunch
 - Setting QuickPunch/TrackPunch Crossfade Preferences
- Recording Multiple Takes
 - Playlist Basics
 - Working with Edit Playlists
 - Using Playlists View
 - Recording to Multiple Playlists
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 2 Review & Knowledge Check

Exercise 2: Controlling Virtual Instruments

- Assign a MIDI Control to a Plug-In Parameter
- Record CC Data for the Assigned Parameter
- Convert CC Data to Automation

- Render the Virtual Instrument to Audio

Lesson 3: Editing and Fine-Tuning Audio

Summary: In this lesson, you will learn various advanced techniques for working with and editing the audio in your session. This lesson explores compositing techniques for assembling a final performance from multiple record takes. It also discusses uses for Dynamic Transport mode for auditioning and editing loops and introduces Beat Detective for analyzing and conforming rhythmic patterns.

- Working in Dynamic Transport Mode
 - Dynamic Transport Mode Operation
 - Dynamic Transport Preferences
 - Editing with Dynamic Transport Mode
 - Example Workflow: Using Dynamic Transport with a Loop
- Compositing from Playlists
 - Auditioning Takes
 - Editing Playlists
 - Rating Clips
 - Filtering the Playlists View by Ratings
 - Track Compositing Workflows
 - Comping from the Main Playlist
- Customizing Fades
 - Editing Fades
 - Using Crossfades for a Comped Performance
- Using the Pencil Tool for Waveform Repair
- Introduction to Beat Detective
 - Beat Detective Functions
 - Beat Detective Overview
- Using Beat Detective to Conform Audio
 - Step 1: Define the Selection
 - Step 2: Detect Transients (Identify Beat Triggers)
 - Step 3: Review the Beat Triggers
 - Step 4: Separate Clips
 - Step 5: Conform Clips to the Grid
 - Step 6 (Optional): Smooth Edits
 - Step 7 (Optional): Render Results after Edit Smoothing
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 3 Review & Knowledge Check

Exercise 3: Using Beat Detective for Tempo Matching

- Use Beat Detective for Beat Matching
- Group the Clips

Lesson 4: Editing and Fine-Tuning MIDI

Summary: In this lesson, we look at some specific editing techniques for fine-tuning MIDI performances, including ways to make flexible changes and revert performance parameters long after the changes have been erased from the Undo queue. We also examine the properties of multi-timbral virtual instruments and consider how they can be used to add multiple, independent sound sources to a session with fewer plug-in instances.

- Enhancing MIDI Performances
 - Groove Quantize
 - Restore Performance
 - Flatten Performance
 - The Change Velocity Operation
- MIDI Real-Time Properties In Depth
 - Track-Based Real-Time Properties
 - Clip-Based Real-Time Properties
 - Real-Time Properties Settings
 - Writing Real-Time MIDI Properties
- Editing and Arranging with MIDI Notes
 - Navigating and Selecting Notes
 - Transposing Notes
 - Splitting Notes between Tracks
 - Using the Select/Split Notes Function
- Using Multi-Timbral Plug-Ins
 - Xpand!2 Example: Setting up a Multi-Timbral Drum Kit
 - UVI Falcon Example: Setting up a Multi-Timbral String Bank
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 4 Review & Knowledge Check

Exercise 4: Editing MIDI

- Create MIDI Tracks and Copy Note Ranges
- Use Select/Split Notes to Copy Viola Notes
- Copy the Violin Notes
- Recall the Falcon Plug-In from a Track Preset
- Assign MIDI Tracks to Falcon Parts

Lesson 5: Advanced MIDI Production

Summary: This lesson looks at advanced techniques for working with MIDI data. We explore the MIDI Editor and Score Editor windows in depth, looking at ways to streamline your editing and arranging tasks when working in a MIDI environment. We also examine ways to customize the appearance of your score in preparation for printing or exporting to Sibelius.

- The MIDI Editor Window
 - Viewing MIDI Editor Windows
 - The Contents of the MIDI Editor Window
 - Working with Velocity, Controller, and Automation Lanes
 - Showing and Hiding Lanes
- MIDI Editor Window Toolbar
 - Record, Solo, and Mute Buttons
 - Edit Modes
 - Edit Tools
 - Track Edit Selector
 - Target Button
- MIDI Editor Window Views
 - Piano Roll View
 - Notation View
- Introduction to the Score Editor
 - The Score Editor Window
 - The Contents of the Score Editor Window
- Adjusting the Appearance of Scores
 - Score Setup
 - Transcription Settings
 - Selecting the Clef
 - Setting the Display Transposition
 - Selecting Attributes
- Editing in the Score Editor
 - Edit Tools
 - Selecting Notes
 - Inserting Notes
 - Printing Scores
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 5 Review & Knowledge Check

Exercise 5: Working in the MIDI Editor

- Modify Notes in the MIDI Editor Window

- Move Notes Between Tracks

Lesson 6: Enhancing Drum Performances

Summary: This lesson examines various methods for cleaning up and editing drum performances. We will look at uses for MIDI drums, techniques for processing and recording the output of drum virtual instruments, techniques for replacing and augmenting recorded drums, and a workflow for improving the timing of multitrack drum recordings using Beat Detective.

- Creating MIDI Drum Patterns
 - Using Drum Loops and Pattern Sequencers
 - Programming Drums
 - Creating a Natural Feel for Programmed Drums
- Processing MIDI Drum Performances
 - Using Separate Virtual Instruments for Each Drum Part
 - Example One: Each MIDI Drum Part on a Separate Track
 - Example Two: All MIDI Drum Parts on the Same Track
 - Using Auxiliary Output Stems
 - Converting MIDI Drum Parts to Audio
- Supplementing a Drum Recording
 - Reinforcing Audio Drums with MIDI
 - Using Drum Samples
 - The SoundReplacer Plug-in
- Beat Detective for Multi-track Drums
 - Key Concepts for Multi-track Drum Editing
 - Drum Editing Workflow
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 6 Review & Knowledge Check

Exercise 6: Replacing a Compromised Drum Part

- Listen to the Tracks
- Build a Kick Replacement Track
- Improve the Results
- Compile Results from Playlists

Lesson 7: Song Structure, Key, and Tempo

Summary: In a music composition or remix scenario, it is common to experiment with an arrangement by modifying the tempo of a performance, analyzing the chord structure, and/or incorporating key changes to add variation. Often these changes will be mapped out prior to

recording any audio parts, using scratch MIDI tracks as the basis for experimentation. Other times, such changes may be applied to Audio tracks as well, using Elastic Audio or similar features for time- and pitch manipulation.

- Tempo Basics
 - Tempo Events
 - Bar | Beat Markers
 - Inserting and Editing Tempo Events (Recap)
 - Inserting and Editing Bar|Beat Markers
 - Editing Bar | Beat Markers
 - Tempo Events versus Bar|Beat Markers
 - What Gets Affected by Tempo Events
- Advanced Tempo Editing
 - Graphic Tempo Editor
 - Editing Tempo Events in the Tempo Editor
 - Selecting and Editing Tempo Events
 - The Tempo Operations Window
- Using Beat Detective to Create a Tempo Map
- Working with Key Changes
 - Adding, Editing, and Deleting Key Signatures
 - Tips for Using Key Signatures
 - Example Key Change Scenario
- Working with Chord Symbols
 - Adding Chord Symbols to Your Session
 - Displaying Chords in the Score Editor
 - Modifying and Deleting Chord Symbols
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 7 Review & Knowledge Check

Exercise 7: Working with Key Changes

- Import the Intro Section
- Set the Base Key
- Modulate to a Different Key
- Prepare and Print the Score

Lesson 8: Arranging and Producing

Summary: This lesson covers ways to create and use sound libraries and catalogs for quickly locating files. It also describes various large-scale editing techniques that can be used when arranging a composition and explores the function and uses of delay compensation within Pro Tools.

- Managing Sound Collections
 - Working with Sound Libraries
 - Working with Catalogs
 - Creating Music and Sound Effects Catalogs
- Modifying and Updating Catalogs
 - Renaming and Modifying a Catalog
 - Updating Catalogs and Relinking Items
 - Locating and Backing Up Catalogs
- Sound Design for Music
 - Importing Files from Sound Libraries and Catalogs
 - Timeline and Session Status Indicators
 - Spotting and Arranging Sound Elements
 - Arranging Successive Clips on a Track
 - Using Timestamps
 - Sound Design Techniques
 - Locking Clips
- Song Arrangement
 - Using Cut Time and Insert Time Operations
 - Selecting, Copying, and Pasting Across all Tracks
 - Using Nested Clip Groups for Arrangement
 - Crossfading Clip Groups
- Delay Compensation and MIDI Offsets
 - MIDI Track Timing Adjustment
 - Delay Compensation for MIDI Beat Clock
 - MIDI Beat Clock Offsets
- Delay Compensation and Hardware Inserts
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 8 Review & Knowledge Check

Exercise 8: Creating a Transition Effect

- Import Audio Files for the Transition
- Edit the Sound Effect Clips
- Safeguard Clips Against Changes

Lesson 9: Mixing and Automation

Summary: This lesson investigates some advanced mixing and automation techniques. We take a look at submixing techniques, processing techniques, static automation techniques, and trim automation. We end with a brief discussion on pan depth—what it is and how to adjust it in Pro Tools.

- Organizing Sessions for Mixing
- Working with Submixes
 - Manually Configuring Submix I/O
 - Using Route to Tracks for Submixes
 - Submixing and Printing Stems
- Writing Static Mixer Settings
 - Two Families of Write Operations
 - Differences Between Write Families
- Using Preview Mode for Static Automation
 - Preview Mode Overview
 - Using Preview with the Manual Write to All Operation
 - Using Preview with the Write to All Enabled Command
 - Choosing between Static Automation Options
- Using Punch Preview
 - Punch-in During Playback
 - Cue Up and Punch
- Using Trim Automation
 - Varieties of Trim Mode
 - Writing Trim Automation
 - Viewing Trim Automation
 - Coalescing Trim Automation
- Stereo Mixing and Pan Depth
 - Pan Law
 - Variable Stereo Pan Depth Setting
 - Stereo Pan Depth Options
 - Selecting a Pan Depth Setting
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 9 Review & Knowledge Check

Exercise 9: Using Automation Techniques

- Familiarize Yourself with the Lead GTR Track
- Adjust the Level during the First Chorus
- Add Automation During the Last Chorus

Lesson 10: Printing your Mix

Summary: This lesson covers several advanced options for delivering your final mix. We look at techniques for bouncing and exporting files, rendering stems, and outputting a mix to multiple devices.

- Outputting Stems

- Bouncing Stems with Track Bounce
 - Bouncing Stems using Busses
 - Rendering Stems to Tracks
- Using Destructive Record for Mixes and Stems
 - Destructive Record Mode
 - DestructivePunch Record Mode
- Using Mirrored Outputs
 - Mirroring on TRS Outputs (HD OMNI Only)
 - Mirroring on Primary Outputs
- Exporting MP3 Files
 - MP3 Export Process
 - MP3 Export Options
- Keyboard Modifiers and Shortcuts from this Lesson
- Lesson 10 Review & Knowledge Check

Exercise 10: Using Automation Techniques

- Generating Final Files
- Route Instrument Groups to Submix Tracks
- Adjust the Mix and Add Final Processing
- Render Instrument Group Submixes to Tracks
- Bounce Stems to Disk
- Exporting Final WAV and MP3 Files