



Professional Recording Arts

DIPLOMA PROGRAM GRID



LaSalle College
Vancouver

QUARTER 1	QUARTER 2	QUARTER 3	QUARTER 4	QUARTER 5	QUARTER 6
PRA100 Fundamentals of Audio	PRA101 Digital Audio & Control Systems	PRA200 Acoustics	PRA201 Psychoacoustics	PRA202 Audio Electronics	PRA391 Senior Project
PRA110 Audio Technology I	PRA111 Audio Recording I	PRA112 Audio Recording II	PRA210 Advanced Recording Techniques I	PRA211 Advanced Recording Techniques II	PRA390 Professional Development and Portfolio
PRA120 Digital Music Technology I	PRA121 Digital Music Technology II	PRA220 Synthesis & Sound Design I	PRA221 Synthesis & Sound Design II	PRA212 Practical Audio Electronics	PRA250 Live Sound Reinforcement
PRA130 Digital Audio I	PRA131 Digital Audio II	PRA230 Digital Audio III	PRA231 Digital Audio IV	Elective	PRA260 Business Fundamentals
PRA140 Music Theory I	PRA141 Music Theory II	Elective	Elective	Elective	Elective

5 Audio Theory Courses	+	1 Studio Prep Course	+	4 Digital Music Technology Courses	+	3 Applied Audio Courses	+	2 Music Theory Courses	+	2 Professional Skills Courses	+	4 Studio Courses	+	4 Digital Audio Production Courses	+	5 Elective Courses	=	TOTAL 90 CREDITS
15 credits		3 credits		12 credits		9 credits		6 credits		6 credits		12 credits		12 credits		15 credits		



Professional Recording Arts

COURSE DESCRIPTIONS



LaSalle College
Vancouver

QUARTER 1

PRA100 FUNDAMENTALS OF AUDIO

Students will be introduced to the foundational concepts in audio theory. They will learn about the nature of audio waveforms, principles behind audio hardware and software signal processors, the design and use of typical microphone types as well as understand the history of the recorded medium and its transition from analog to digital. In a practical component students will learn to distinguish between various frequency bands.

Credits: 3

PRA110 AUDIO TECHNOLOGY I

Introduction to professional audio recording equipment with an emphasis on its practical use in a hands on environment. The course content includes audio signal flow and digital multitrack recorder operations. The protocols and procedures of the professional audio industry will be discussed and followed in class. Students will also be exposed to the work habits, attitudes and expectations of the audio industry.

Credits: 3

PRA120 DIGITAL MUSIC TECHNOLOGY I

Students develop a working theoretical and skillsbased knowledge of the multi-timbral synthesizer and the sequencing environment within the context of the contemporary MIDI production studio. Both live and studio applications are covered, including dynamic and static parameter automation.

Credits: 3

PRA130 DIGITAL AUDIO I

Digital Audio I introduces students to the concepts, procedures and techniques of non-linear digital audio editing. Through lectures and in-class projects, instruction covers digital audio theory and developing non-linear audio workstation skills. By the end of the course, students are ready to apply their skills to intermediate and advanced work in non-linear digital audio production effects and mixing.

Credits: 3

PRA140 MUSIC THEORY I

Students examine the fundamental concepts of music and its relationship to history and the technology used in composition and recording. A review of the terminology used by musicians, songwriters, arrangers, producers and engineers to communicate with each other is included. Music examples are used throughout and basic keyboarding skills are developed to apply to course material.

Credits: 3

QUARTER 2

PRA101 DIGITAL AUDIO & CONTROL SYSTEMS

Students will learn the fundamentals of digital audio theory through examination of current and historical systems. The theory of control systems will be introduced through common music/audio based protocols leading to consideration of AV industry standards. A practical eartraining component will train students to listen critically and to aurally identify various features of audio signals.

Prerequisite: PRA100

Credits: 3

PRA111 AUDIO RECORDING I

An advanced foundation course in analog recording with an emphasis on practical, hands on use of the equipment to prepare students for careers as recording engineers. Students will learn more advanced console signal flow, multitrack recorder and patch bay operations, as well as becoming familiar with outboard microphone pre amps, effects and signal processors. Industry protocols and procedures will be followed with new concepts introduced in a three week recording session conducted by the instructor with assistance from students.

Prerequisite: PRA110

Credits: 3

PRA121 DIGITAL MUSIC TECHNOLOGY II

Students develop a detailed knowledge of the MIDI language. This leads to more flexible and in-depth uses of sequencers involving graphical and list based editing, static and dynamic parameter and tempo automation, and the basic recording of MIDI messages. Professional skills are taught in a MIDI production studio using industry standard software and hardware.

Prerequisite: PRA120

Credits: 3

PRA131 DIGITAL AUDIO II

Students move beyond the basics of Pro Tools and digital audio skills. Topics include SMPTE time code and synchronization; computer based digital audio workstations, and Pro Tools software and hardware. Curriculum also covers sound design, field recording, digital audio transfer protocols, software-based effects plugins, and real-time automation. The course also includes instruction and practical experience using software samplers and synthesizers with Pro Tools and the integration of MIDI control surfaces.

Prerequisite: PRA130

Credits: 3

PRA141 MUSIC THEORY II

Students develop keyboard and theoretical musical skills. Practical keyboard skills are fused with relevant theoretical concepts necessary for success in advanced music composition courses.

Prerequisite: PRA140

Credits: 3

QUARTER 3

PRA200 ACOUSTICS

Students are introduced to the theoretical concepts of acoustics and acoustic design. They will learn to measure and evaluate acoustic spaces and develop an understanding of both the acoustical and electronic approaches to acoustic correction. Examples of studio and listening room acoustics will be examined. A practical ear-training component will teach the ability to identify and distinguish acoustical properties of spaces.

Prerequisite: PRA100

Credits: 3

PRA112 AUDIO RECORDING II

A project oriented, analog recording course where students will continue to develop their professional skills, work habits and attitudes expected by the modern professional recording industry. Working under the guidance of the instructor, students will undertake a variety of recording projects chosen to best exemplify the demands of the industry.

Prerequisite: PRA111

Credits: 3

PRA220 SYNTHESIS & SOUND DESIGN I

Students learn MIDI and basic synthesis skills for music production and sound design, and develop familiarity with sound design concepts using subtractive synthesis methods. Topics covered include configuring and maintaining a complex MIDI studio through a multiport interface, use of programmable or MIDI based hardware interfaces, advanced sequencing concepts, automating parameters in external MIDI devices, subtractive synthesis basics and audio recording in a sequencing environment.

Prerequisite: PRA121

Credits: 3

PRA230 DIGITAL AUDIO III

This course is designed to take the basics of DAW operations to an advanced level through hands on training and projects related to the post and music industries. The focus will be on increasing speed and efficiency using Pro Tools and the artistic side of editing and mixing. Instructor and student feedback and evaluation of projects will be encouraged throughout all stages of project development. The projects for the course will include three music mixes of different styles; a remix of one song using softwarebased samplers and synthesizers; a project using a short film where students will have to edit all the ADR and dialogue, create and edit sound effects, music and backgrounds and complete a mix all using proper post production techniques for organization and editing.

Prerequisite: PRA131

Credits: 3

ELECTIVE

Credits: 3

QUARTER 4

PRA201 PSYCHOACOUSTICS

This course builds on and expands the development of critical listening skills and the introduction of psychoacoustics and cognition. Topics covered include: perception of pitch, loudness and timbre; structure of the ear; hearing damage; voice physics and neurology; consonance, dissonance and tuning systems; auditory stream and source segregation and perceptual fusion and auditory perspective.

Prerequisite: PRA100

Credits: 3

PRA210 ADVANCED RECORDING TECHNIQUES I

This course incorporates the skills needed to integrate the various technologies of, and engineer in, a hybrid digital/analog recording studio environment. Students explore digital audio theory and interact with analog consoles, digital recorders, external DSP, software signal routing, interfacing equipment, and synchronizing digital audio streams. Topics include linear digital audio, digital filtering, analog-to-digital/digital-toanalogue conversion, dithering, error correction and concealment, digital storage media, encoding methods involving data compression, digital audio interface standards, DAW interchange standards and synchronization methods.

Prerequisite: PRA112

Credits: 3

PRA221 SYNTHESIS & SOUND DESIGN II

This course will survey both commercially available synthesis methods and recent developments at audio research institutes. Students will also survey the current market for hardware and software implementations of various synthesis methods. Analytical listening sessions will expose students to synthesis methods in various musical contexts. Detailed study of subtractive, FM, physical modeling and granular synthesis will culminate in original sound design projects.

Prerequisite: PRA220

Credits: 3

PRA231 DIGITAL AUDIO IV

This course introduces students to the DAW in a studio environment. Students learn to conduct tracking sessions and both stereo and surround mix sessions using a control surface, sync all elements of a production using SMPTE timecode, understand the pre-mastering process and be able to deliver final projects in current delivery formats.

Prerequisite: PRA230

Credits: 3

ELECTIVE

Credits: 3

QUARTER 5

PRA202 AUDIO ELECTRONICS

This course is an introduction to the theoretical foundation of analog audio electronics with a complete overview of all basic components and main principles.

Prerequisite: PRA100

Credits: 3

PRA211 ADVANCED RECORDING TECHNIQUES II

Students develop advanced engineering skills and knowledge. Building upon the knowledge gained in previous studio courses, they will continue to master the techniques and equipment used in the professional recording industry. They will also become familiar with various musical formats, and the aesthetic and acoustical issues specific to each genre and instrument.

Prerequisite: PRA210

Credits: 3

PRA212 PRACTICAL AUDIO ELECTRONICS

This course examines the recording studio from an electronics perspective, following a systems approach which emphasizes the integration of various equipment and formats. Topics include: basic audio circuitry components and their functions, test equipment, audio mixer signal flow and circuitry; system grounding issues; interfacing issues; patch bays; balanced lines; soldering techniques; project constructions; non-audio cables; cabling and connectors.

Prerequisite: PRA110

Co-requisite: PRA202

Credits: 3

ELECTIVE

Credits: 3

ELECTIVE

Credits: 3

QUARTER 6

PRA391 SENIOR PROJECT

This course initiates a two quarter long comprehensive project which will be integral to students' final portfolios. Students will employ their cumulative skills to pre-produce a significant, sophisticated, multi-track digital audio work. Committee and/or faculty will approve the project content and type of the audio work. Projects will be carried out individually or in groups based on the needs of the class as determined by the instructor.

Prerequisite: Permission of the Academic Director

Credits: 3

PRA390 PROFESSIONAL DEVELOPMENT AND PORTFOLIO

Built on the skills developed in previous courses, this course allows each student to determine and design the final organization and presentation of the graduation portfolio. Each student is expected to verbally present the portfolio and address audience questions as a format of defense.

Prerequisite: Permission of the Academic Director

Credits: 3

PRA250 LIVE SOUND REINFORCEMENT

In this course students learn to design, operate and troubleshoot small to medium-sized PA systems, and to overcome the problems inherent in difficult acoustical environments. Students are exposed to the audio systems and acoustical environments encountered in live sound situations (sound reinforcement for performances, speeches and lectures, MC/ DJ systems). Signal flow and troubleshooting skills are continually reinforced in the process of setting up and tearing down complete sound systems during classes. There is also a theory component to the course, which supports the practical application.

Prerequisites: PRA100 and PRA110

Credits: 3

PRA260 BUSINESS FUNDAMENTALS

Students gain valuable knowledge and skills to prepare them for being self-employed in the media entertainment industry. Freelancing, contracts, invoices, records, communications, marketing and taxes are practical topics that are addressed.

Credits: 3

ELECTIVE

Credits: 3