MUSI S290: Electronic Dance Music: Fundamentals

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**Description:** A developmental history of technology in music creativity, with particular focus on electronic dance music and the aesthetics and characteristics of selected genres such as house, techno, trance, dubstep, jungle, and drum 'n' bass, among others. Includes an introduction to the fundamentals of musical notation - meter, rhythm, scales, keys, melodies, and chords – as expressed in these genres. EDM portfolio exercises in Ableton Live Intro.

**Required Software:**  
MuseScore 3.0 – download free here: [https://musescore.org/](https://musescore.org/)  

**Links and Resources:**
- Ableton Live Home
- Ableton's Tutorials
- Ableton's Official YouTube Channel
- MuseScore 3.0 Home
- MuseScore 3.0 handbook
- MuseScore's Official YouTube Channel
- [Yale ITS: lynda.com](https://lynda.com)

**Grading:**  
Participation each class: 10%  
Listening & Notation Exercises A-D: 20%  
Homework Assignment Questions 1-5: 20%  
Analysis Exercises, 1 & 2: 20%  
Portfolio Project A & B: 20%  
Final Presentation: 10%

**Not required:** Familiarity with musical notation or music technology is not required.
Topical Overview:

Week 1

Class 1: Basic Terminology 1; Rhythm & Meter; Rhythmic Motives, Patterns & Syncopation; Syncopation Treatments; Tour of Live

Topics:

Basic terminology 1:
- Harmonicity vs. inharmonicity
- Frequency
- Amplitude
- Timbre
- Envelope

Musical elements:
- Rhythm & meter
- Rhythmic motives, patterns & syncopation
- Syncopation treatments – clave, rumba & tresillo

The DAW – Ableton Live Intro:
- Tour of Ableton Live Intro
- Purchasing & installing Ableton Live Intro

Watch these Class 1 videos BEFORE class:
- Basic terminology 1
- Rhythm & meter
- Rhythmic motives, patterns & syncopation
- Syncopation treatments - clave, rumba & tresillo

Practice with these Class 1 videos BEFORE/AFTER class:
- Rhythm & meter: practice
- Rhythmic motives, patterns & syncopation: practice
- Syncopation treatments - clave, rumba & tresillo: practice

Class 2: Precursors - Early Analog Recording, *Musique Concrète* Techniques, Early Drum Samplers & Synthesizers; Drum Set & Auxiliary Percussion Instruments

Topics:

Precursors:
- Early analog recording
- Musique concrète techniques
- Musique concrète – listening examples
- Early drum samplers & synthesizers

Musical Instruments:
- Drum set instruments: kick & snare drums; cymbals; tom-toms.
- Auxiliary percussion instruments: shakers and scrapers; hand drums; other hand percussion
- Drum set notation with *MuseScore 3.0*

Repertoire:
Musique concrète examples: Selected excerpts

Watch these Class 2 videos BEFORE class:
- Early analog recording
- Musique concrète techniques
- Early drum samplers & synthesizers
- Drum set – kick & snare drums
- Drum set – cymbals
Week 2

Class 3: Rhythmic Characteristics & Beats – House, Techno & Trance; Basic MIDI; Audio Effects #1

Topics:

Musical elements:
- Rhythmic phrases; repetition & variation
- Turnaround points

Genres - straight beat characteristics:
- House
- Techno
- Trance

MIDI – Musical Instrument Digital Interface:
- Basics
- MIDIMessages
- MIDI Clips: clip view & MIDI editor view
- MIDI Tracks

MIDI Controllers:
- MPD-18 Drum Pad Controller

Ableton Live Intro:

Impulse - Drum Machine #1:
- Overview
- Implementing drum kits & auxiliary percussion racks
- Impulse racks – a basic instrument rack

Audio effects #1:
- Delay
- Audio effects racks

Repertoire:
Straight beat examples:
- House - *Your Love* (1986) by Freddie Knuckles & Jamie Principle; *Big Fun* (1988) by Inner City

Watch these Class 3 videos

BEFORE class:
- Rhythmic phrases; repetition & variation; turnaround points
- Genres: rhythmic characteristics in House, Techno & Trance
- MIDI – Musical Instrument Digital Interface
- MPD-18
- Impulse
- MIDI Clips & tracks
- Simple delay

Class 4: Rhythmic Characteristics & Beats – Dubstep, Jungle, Drum ’n Bass; Audio Effects #2; Basic Mixing #1

Topics:

Genres - broken beat characteristics:
- Dubstep
- Jungle
- Drum ’n Bass
Ableton Live Intro:

Drum Rack - Drum Machine #2:

- Overview
- Implementing drum kits & auxiliary percussion racks in Drum Rack
- Implementing FX racks in Drum Rack
- Drum Rack racks w/ macros

Audio effects #2:

- Delay w/ Ping Pong
- Audio effects racks

Mixing template #1:

- The Mixer
- Routing Impulse & Drum Rack
- Limiter
- Send & return tracks

Repertoire:

Broken beat examples:

- "Amen Brother" Break - “Amen Brother” - 137 BPM; Sierra Drums Break - 174 BPM
- Dubstep - “Xylophobia” (2010) - Icicle; First Of The Year (Equinox) (2011) - by Skrillex
- Jungle - “Bomber” (1995) - Aphrodite
- Drum ’n Bass - “Move It” (2009) - Ed Rush & Optical

Watch these Class 4 videos BEFORE class:

- Genre: rhythmic characteristics in Dub-step, Jungle & Drum ’n Bass
- Drum Rack
- EQ3
- Ping Pong Delay
- Limiter

Week 3

Class 5: Basic Terminology 2; Precursors – Early Synthesizers; Treble & Bass Clef; Minor Keys & Scales; Simpler - Overview

Topics:

Musical elements:

- Treble & bass clefs
- Minor Mode: keys & scales
- Minor Mode: chords & progressions

Basic Terminology 2:

- Harmonic series
- Sine, triangle, square & sawtooth waveforms
- Additive synthesis
- Subtractive synthesis

Precursors:

- Early synthesizers

Ableton Live Intro:

Simpler – as synthesizer/sampler:

- Overview
- Implementing synth & keyboard pads
- Simpler racks – basic pad instrument racks
Watch these Class 5 videos BEFORE class:
- Treble & bass clefs
- Minor keys & scales
- Minor chords & progressions
- Basic Terminology 2
- Early Synthesizers, Part 1
- Early Synthesizers, Part 2
- Simpler

Class 6: Major Keys & Scales; Simpler – Synth & Keyboard Pads; Audio Effects #3; Dance Mix Compression

Topics:
Musical elements:
- Major Mode: keys & scales
- Major Mode: chords & progressions

Ableton Live Intro:
Simpler – as synthesizer/sampler:
- Keyboard, pad, bass, lead and FX instruments
- Simpler racks w/ macros & chains

Audio effects #3:
- Auto Pan
- Auto Filter

Dance Mix Compression:
- Compressor

Mixing template #2:
- The Mixer
- Routing Multiple Simpler Tracks
- Limiter
- Send & return tracks

Watch these Class 6 videos BEFORE class:
- Major keys & scales
- Major chords & progressions
- Reverb
- Auto pan
- Auto filter

Week 4

Class 7: Melodies & Bass Lines; Lead & Bass Synths; MIDI Effects

Topics:
Musical elements:
- Melodies
- Bass lines

Ableton Live Intro:

Simpler – as synthesizer/sampler:
- More Simpler instruments

MIDI effects:
- Pitch & Scale
- Chord
- Arpeggiator
- MIDI effects racks
Watch these Class 7 videos BEFORE class:

• MIDI Effects: Pitch & Scale
• MIDI Effects: Chord
• MIDI Effects: Arpeggiator

Class 8: Analysis & Formal Structures

Topics:

• Intro
• Main section #1 - Drop #1
• Breakdown
• Main section #2 - Drop #2
• Outro

Repertoire, among others:

• Gecko - by Oliver Heldens
• Lay Me Down by Avicii
• Rave - by Sam Paganin
• We’ll Be Coming Back - by Calvin Harris
• Core, by RL Grime
• Reloaded, by Markus Schulz

Week 5

Class 9: Class Presentations

Final Project Presentations by students

Class 10: Class Presentations

Final Project Presentations by students