Music Technology Foundations

Course Syllabus

Course overview

Technology has greatly altered how we write, listen to and enjoy music. This music course will show you how to apply new technologies to your own creative practice. Music Technology Foundations draws on Adelaide's world-class pioneering expertise in making electronic music, to provide a great foundation to a career in music and to enable any learner to use technology in creative ways.

In Music Technology Foundations, you'll learn about the core principles of music technology, including sound, audio, MIDI, effects and sequencing. Each week, you'll complete creative practical tasks in freeware and browser based apps, and you'll share the music you make with the course instructors and fellow learners. This practical work is underpinned with historical context and essential theory, so that you can gain even greater insight into your music.

What you will learn:

- History, theory and practice of music technology

- Sound, audio, MIDI, effects and sequencing

- Hands-on practice with music-making using contemporary digital tools.

Week 1: Introduction to sound

Week 1 Learning Objectives
- Understand what Music Technology is and how it's evolved throughout history
- Understand how sound waves travel and how sound can be measured and recorded
- Explore the differences between the perception of sound and the physical properties of sound
- Apply techniques and processes to record sounds using common digital recording devices.

Week 1 Assessment Requirements

- Weekly questions and practical activity.

Week 2: Digital Audio

Week 2 Learning Objectives
- Understand what audio is and the differences between analogue and digital audio
- Understand the basic elements of digital audio: storage media, file formats, bit depth, sample rates and how they affect audio quality
- Explore the use of digital audio editing software to clean up and edit digital audio samples.

Week 2 Assessment Requirements

- Weekly questions and practical activity.

Week 3: MIDI - The Musical Instrument Digital Interface

Week 3 Learning Objectives
- Understand the Musical Instrument Digital Interface (MIDI), its history and how MIDI is still used today
- Explore how MIDI represents music and the differences between MIDI sequencing and digital audio
- Learn how to create audio loops from sounds produced by a web-based drum machine.

Week 3 Assessment Requirements

- Weekly questions and practical activity.

Week 4: Synthesis

Week 4 Learning Objectives
- Understand what synthesis is and who the pioneers were responsible for its creation
- Compare and understand the differences of Subtractive, Additive and Modulation Synthesis.
- Develop techniques and processes to create new synthesised sounds using a web-based synthesiser.

Week 4 Assessment Requirements

- Weekly questions and practical activity.

Week 5: Effects and processing

Week 5 Learning Objectives
- Understand how effects and processing can be used to change the qualities and attributes of sound
- Understand how audio effects were inspired by natural sound effects
- Explore the differences between analogue and digital effects
- Experiment with some of the built in effects found in digital audio editing software
- Develop and apply techniques to transform existing sounds into larger segments.

Week 5 Assessment Requirements

- Weekly questions and practical activity.

Week 6: Pulling it all together

Week 6 Learning Objectives
- Explore a range of methods and techniques used to create different styles of music
- Develop skills to perform multi-tracking using digital audio editing software
- Apply methods and techniques learnt throughout the course to create a 1 – 2 minute audio track.

Week 6 Assessment Requirements

- Weekly questions and practical activity.

DISCUSSION FORUM ETIQUETTE AND FREQUENCY
We expect you to follow the edX Code of Conduct at all times and keep your posts/responses positive on the learning forums. Post regularly, at least once per discussion activity and be sure to respond to your peers, as instructed.