Music Production
Module Descriptors
Spring 2019

BA (Hons) in Music Production

STAGE 1

Module	Critical Listening and Audio Analysis
Course code	BAMPH-CLAA
Credits	5
Allocation of marks	50% Listening Tests
	50% Final Examination

Intended Module Learning Outcomes

On successful completion of this module the learner will be able to:

i. Explain the nature of sound; how sound is produced; how it propagates through a medium; distinguishing the various attributes of sound.
ii. Describe the human auditory system and the functions of each part of the auditory pathway.
iii. Describe and clarify issues related to localisation and spatialisation.
iv. Discuss the psychology of sound perception citing relevant forms and examples.
v. Critically analyse recordings and identify constituent components and effects and defects.

Module Objectives

The objective of the module is to introduce the learner to the principles of psychoacoustics (human auditory system) — and Critical Listening and Audio Analysis (estimating changes in sound frequency, sound level, band limitations and irregularities, distortion, noise, etc.

Module Curriculum

Critical Listening and Audio Analysis

- Estimating frequencies
- Sound level changes
- Frequency band limitations
- Frequency response irregularities
- Sound quality
- Detecting distortion
- Signal versus noise
- Reverberation colourations
- Voice colourations
- Listening with discernment

Psychoacoustics and auditory perception

- Simple harmonic motion, sine waves, Fourier analysis
- Signal temporal characteristics
- Resonance coupling and damping
- Harmonics and formants
- Energy power intensity, SPL
- Decibels and inverse square law and logarithmic scales
- Perception of loudness (Weber)...loudness and frequency (Fletcher)
- Pitch-range and discrimination, and intensity, duration and masking
- Complex tones and pitch perception
- Definition of timbre
- Anatomy and function of the ear and auditory nerve