

**BMus degree**  
**School of Creative Arts and Technologies | Ulster University**

**MUS112 2017: Music Technology 2, Desktop Audio Production**

**Module lecturer: Dr Brian Bridges**

*Key topics: synthesis, sound design, digital audio handling, basic mixing*

**Week 1: intro, history and key concepts**

**Week 2: Intro, history and key concepts (2); practical introduction to synthesis**

**Week 3: : Synthesis 1: waves, partials, musical timbre and subtractive synthesis**

- Introduce key concepts of wave shape and harmonic structure, basics of wave shape, filter cutoff and envelope with ES1
- Aesthetics: early electronic popular music (1960s-1970s)

**Week 4: Synthesis 2: Advanced/hybrid subtractive synthesis/sound design, FM, Physical modelling**

- *Retrosynth Wavetable and/or ES2: modulation routings and wavetable, more advanced sound design, intro to FM and Physical Modelling*
- Aesthetics: digital synths in the 1980s and 1990s

**Week 5: Synthesis recap and feedback**

**Week 6: no class - project/ensemble week**

**Week 7: university holiday/reading day: no class**

**Week 8: MIDI editing, programming**

- MIDI recording, programming and editing recap
- Intro to MIDI effects - arpeggiator
- Introduction to Drum machines
- Aesthetics: arpeggiators

**Week 9: Intro to Sampling**

**Week 10: Creative effects usage and mixing**

- The mixer and related issues (panning, levels, routing, busses)
- Recap of basic effects types: reverb, delay, distortion, modulation Insert versus auxiliary effects - examples and reasons  
Advanced effects usage : delay designer (time permitting)
- Aesthetics: reverb and spatial effects

**Week 11: Mixing + feedback workshop/progress check/issues clinic/recap**

- EQ and mixing
- Aesthetics: ambient, industrial, glitch, dubstep, hybrid forms

**Week 12: project week - no class (feedback sessions by appointment)**