Anglia Polytechnic University – Studio Report

Douglas Nunn

Department of Maths, Physics and Electronics, School of Applied Sciences
Anglia Polytechnic University, Cambridge, UK
d.j.e.nunn@anglia.ac.uk

Abstract

This paper describes the electronic music studios developed to support the Audio and Music Technology degree courses at Anglia Polytechnic University.

1 Introduction

Since 1995 Anglia Polytechnic University has offered three-year BSc(Hons) degree courses in Audio and Music Technology. This currently attracts approximately 70 students per year. The course operates at the Cambridge campus in the Department of Maths, Physics and Electronics, in collaboration with the Music Department.

Departmental teaching resources include several well-equipped electronic music studios, described below.

2 Course structure

The course examines the principles and practice of analogue and digital technology used in the creation of music. This is developed further by investigating recording and reproduction, together with waves and acoustics. Complementary modules build on the themes of electronics, microprocessors, computer control, synthesis, sequencing, signal processing, and internet applications, as applied to Music Technology.

APU uses a modular system, in which students take the core (compulsory) modules plus a selection of the designate (optional but highly relevant) modules.


Students can also choose a few modules from a different field – most commonly music, computer science, business, or law. It is also possible to study for a combined honours degree.

3 Studio facilities

The studio facilities comprise one large performance/teaching room, a MIDI laboratory, a live recording room, and three other workshop studios. The studios are used both for class-based teaching and independent student work. Modules run by the Music Department use their electronic music studios in Paradise Street.

The emphasis is towards the use of contemporary digital equipment. Each studio has a different hardware configuration in order to give experience with products from a range of manufacturers.

Room 261 is the main recording studio and performance space. Centre stage is a Kawai grand piano. A PC with Cubase is used with various MIDI syntheisers and processors, a Soundcraft Spirit Studio 16-channel mixer, and an ADAT recorder.
Main studio, with media workstation on the left

261: Kawai grand piano, Roland EG-101 synthesizer, Yamaha ST35 synthesizer, Yamaha TG300 module, Phonic PCL3200 compressor, Alesis Quadraverb, Viglen/16 MB/1.6 GB, AWE32, Technics A900 MX2 amplifier, Soundcraft Spirit Studio mixer, P&R PB40 patchbay x2, UBL speakers, Technics SL-PG701a CD player, Alesis ADAT

This room also contains the media workstation, a PC with digital I/O used to master music across a range of media – CDR, DAT, MD, DCC, HDR, cassette, and zip disk.

Media workstation: PC/48 MB/2.1 GB, AWE64, MultIWav Pro digital I/O, Zip drive, Mackie 1202 mixer, P&R PB40 patchbay x2, Technics RS-TR373 cassette deck, Ricoh RO-1420C CDR, Tascam DA-20 DAT, Sony MD5-531 Minidisc, Philips DCC730, Soundscape hard disk recorder, Adaptec SCSI adapter AHA-1542CP

MIDI Laboratory – 257

Room 257 is the MIDI laboratory, containing 20 PCs with AWE soundcards and MIDI keyboards, running Cubasis Audio and software synthesis packages. The PCs are connected by a local network. There are also several TV cards, a scanner, and three CD recorders. All PCs can be connected to the main amplifier. As well as music, the laboratory is also used for multimedia and broadcasting applications.

257: PC x20, AWE64 x11, AWE32 x9, Roland PC-200 MIDI keyboard x19, Bespeco VM24 footswitch x10, Evolution MK-149 keyboard, PC TV card x4, CDR, Scanner, Epson FX-850 printer, Technics SU-P300 amplifier, CDR, CDRW x2, Mordaunt-Short speakers

Acoustic studio – 257a/d

Rooms 257a/d are the control room and live room, and are used primarily for recording acoustic instruments. A Mackie 32:8:2 mixer brings these and a Quadrasynth through a range of effects processors for 16-channel ADAT recording.

257a/d: Drum kit, Alesis Quadrasynth, Behringer dynamic processor MX2100 x4, Behringer Ultraplex II enhancer EX2108, Digitech Studio V2 Quad effects, Samson Servo-240 amplifier, Mackie 32:8:2 mixer, P&R PB40 patchbay x3, Soundcraft Spirit Absolute II speakers, Alesis ADAT XT x2
Room 257c is a high-specification all-digital studio, built around a Cubase PC and the Yamaha O2R digital mixer with automation and onboard effects, synchronised to the ADAT recorder. Sound sources include a Korg Prophecy, a Kurzweil K2500, and an Akai S3000XL.

Room 257b is a compact digital studio. It includes a Cubase PC, a Kurzweil PC-88 synthesiser, another S3000XL, and other modules and effects, routed via a 16-channel mixer to ADAT.

Room 255 is another PC-based studio, this time using Cakewalk. A Fatar SL-1100 keyboard controls various modules and processors. The primary recording medium is the Akai DR-16 hard disk recorder, with mastering to DAT.

4 Activities

A range of performance opportunities exist at APU. Students and staff perform at a variety of events within the department, in the Mumford Theatre, and in the Paradise Street studios of the Music Department. Both departments participate in the annual Cambridge Digital Arts Festival, along with musicians from the city’s other university.

5 Research

Some members of staff and their research interests are:

Geoff Batty (Acoustics; Musical Instruments; Organ Performance, Construction and Development)

Dr Allen Brown (Real-time DSP; Music Technology; High Resolution Spectral Analysis; Multimedia Technology)

Dr Douglas Nunn [Studio manager] (Music Technology; Auditory Scene Analysis; Software Synthesis; Gestural Controllers; Brass Instruments)

Dr Geoff Sweet [Pathway leader and Admissions tutor] (Music Technology; Modern Piano Music; DSP; Inverse Problems of Fuzzy Instrumentation)

John Ward (Music Technology; Computer Applications; Dance Music)

Peter Wilkinson [Technician] (Music Technology; Studio Design)

James Nelson [PhD student] (Real-time Wavelet Analysis)

Further information is available on the website at http://www.anglia.ac.uk/appscwww/mped/