UK LEVEL: 4
UK CREDITS:15

(Formerly: MU 2049 Recording Studio Techniques I)
(Revised Fall 2022)

PREREQUISITES:	None
CATALOG DESCRIPTION:	A comprehensive introduction to the tools and techniques found in a modern recording studio. Extensive practical work based around making well-managed high-quality recordings using a range of studio tools (microphones, mixers etc.) will be complemented by an exploration of the underlying theoretical issues in acoustics and sound engineering, and the manner in which these tools and techniques can be extended to live sound engineering.
RATIONALE:	The everyday professional practice of musicians and other creative artists is increasingly relying upon their familiarity with technological tools. The recording studio is perhaps the most significant place in which these tools come together in the service of music and sound, and as such an understanding of studio techniques has become something viewed as a fundamental skill in many music and wider arts programs. Both studio and live sound engineering will be explored, providing skills and understanding that students are certain to draw upon in their future studies.
LEARNING OUTCOMES:	After successfully completing this course students should be able to: 1. Demonstrate the use of a range of recording studio equipment across a range of practical studio situations. 2. Apply studio-based skills and understanding to the design and operation of a suitable system for a range of different live sound engineering situations. 3. Explain and discuss the links between theoretical principles and their role in the practical design and operation of common sound engineering tools. 4. Plan and implement a studio project combining practical and theoretical issues within a controlled timeframe.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • lecture and seminar sessions exploring concepts and principles; • structured practical work in the recording studio; • extensive private study using freely available software on a student's own computer; • peer feedback workshops; • use of a learning management system (Blackboard) where instructors post lecture notes, assignment instructions, announcements and additional resources; • students are encouraged to make full use of their instructor's office hours, where they can ask questions, see their assigned work results and/or go over lecture material; • support from the Student Academic Support Services (SASS), who offer one-to-one and group workshop sessions to support the development of academic and study skills.
ASSESSMENT:	**Summative:**

First assessment • A folio of practical studio exercises and activities, documented via recordings and video, with critical commentaries designed as practical guides for beginner studio users.	**30%**
Final assessment	**70%**

	• A complete recording studio project, documented via recordings, DAW sessions and video, with a critical evaluation in the form of a video reflection.
	Formative:
	Studio Report **0**
	The formative assessments prepare students for both summative assessments. Learning Outcomes 1 & 2 are assessed in the first assessment. Learning Outcomes 2, 3 & 4 are assessed in the final assessment. *Students are required to resit failed assessments in this course.*
INDICATIVE READING:	**REQUIRED READING:** Dittmar, Tim, *Audio Engineering 101: A Beginner's Guide to Music Production.* Routledge, 2018. **RECOMMENDED READING:** Rumsey, Francis & McCormick, Tim, *Sound and Recording: Applications and Theory,* Routledge, 2021.
INDICATIVE MATERIAL: *(e.g. audio visual, digital material, etc.)*	**REQUIRED MATERIAL:** Listening material (audio recordings) will be available within the studio and in electronically accessible form.
COMMUNICATION REQUIREMENTS:	Students will be expected to make use of a learning management system (Blackboard) and have an active ACG email account. All written work should follow current MLA standards for formatting, style and citation.
SOFTWARE REQUIREMENTS:	Students will need to use Microsoft Word or Open Office for word processing and submission of written work. They will also need a functioning ACG student account and internet connection for access to online music databases (available on campus and at home through the ACG library) and newspaper websites. The course will make extensive use of a recording studio facility on campus, which will contain specialist sound engineering software. At the time of writing the studios at ACG are based around Apple's Logic (www.apple.com/logic-pro) Some of this software used will also be freely available (either as shareware or running in 'demo' modes), allowing students to install and use it on their own computers in order to better practice its use away from the specialist environment of the studio. An example of such software in current use is Reaper (www.reaper.fm).
WWW RESOURCES:	A wide range of resources are available under the general field of sound engineering. A selection will be used from the following categories of sites, with students directed to specific resources during the course: • Equipment manufacturers of equipment found in the studio (with a special focus on obtaining and reading user manuals and user support guides). • Publisher-maintained 'companion websites' for the textbooks used in the course, with special mention of that for Rumsey and McCormick's text • Sound engineering industry magazines such as *Sound on Sound*(www.soundonsound.com) and *Audio Media* (www.audiomediainternational.com) • The Microphone University project from DPA *(www.dpamicrophones.com/en/Mic-University.aspx)*

INDICATIVE CONTENT:	Extensive practical sessions will take place in the recording studio facility, in combination with supporting theoretical sessions.
	Practical Studio Skills • Microphone technology • Microphone types and patterns • Microphone techniques per instrument • Stereo and Surround microphone techniques • Mixing desk configuration, routing and operation • Strategies for managing gain and level • Mixing desk equalization • Outboard equipment operation • Operation of analog and digital recording devices • Typical recording techniques for a range of different situations • Live sound reinforcement – principles and techniques • Location recording – stratergies for equipment & location **Computer Skills** • Typical DAW operation with the studio • Audio interfaces and integration with studio recording • Audio processing for recording • Case study recording projects **Theoretical Understanding** • Properties of sound • Acoustics of spaces • Principles of analog and digital audio • Signals and connections in professional audio equipment • Listening for problems – common issues with recorded audio and how to hear them