STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK

MASTER SYLLABUS

GMMD 353 – Digital Audio Recording Technologies

For available course numbers, contact the Registrar's Office at registrar@canton.edu

CIP Code: 50.0913 Music Technology

For assistance determining CIP Code, please refer to this webpage
https://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55
or reach out to Sarah Todd at todds@canton.edu

Created by: Christopher Sweeney
Updated by:

School: Canino School of Engineering Technoloty
Department: Decision and Graphic Media Systems
Implementation Semester/Year: Fall 2025

A. TITLE: Digital Audio Recording Technologies

B. COURSE NUMBER: GMMD 353

C. CREDIT HOURS (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity):

# Credit Hours per Week	**3**
# Lecture Hours per Week	**2**
# Lab Hours per Week	**2**
Other per Week	

D. WRITING INTENSIVE COURSE:

Yes	
No	x

E. GER CATEGORY:

Does course satisfy a GER category(ies)? If so, please select all that apply.

[1-2] Communication	
[3] Diversity: Equity, Inclusion & Social Justice	
[4] Mathematics & Quantitative Reasoning	
[5] Natural Science & Scientific Reasoning	
[6] Humanities	
[7] Social Sciences	
[8] Arts	
[9] US History & Civic Engagement	
[10] World History & Global Awareness	
[11] World Languages	

F. SEMESTER(S) OFFERED:

Fall	
Spring	
Fall and Spring	x

G. COURSE DESCRIPTION:

This course provides an in-depth study of digital audio recording technologies. It covers the principles and practices of digital audio, including recording, editing, mixing and mastering. Students will incorporate live instrumental and/or vocal recordings and MIDI instrumentation with a Digital Audio Workstation. Techniques will include both studio and field capture.

H. PRE-REQUISITES: GMMD 112 Intro to Time Based Media
CO-REQUISITES:

I. STUDENT LEARNING OUTCOMES:

Course Student Learning Outcome [SLO]	Program Student Learning Outcome [PSLO]	GER	ISLO & Subsets
a. Demonstrate practical awareness of digital audio and sound theory	Demonstrate understanding of how interpretation and context work across media forms		5
b. Operate Digital Audio Workstations effectively	Assess practical issues concerning multimedia and prepare and choose solutions		5
c. Utilize microphones, amps, physical and digital effects and audio and MIDI interfaces for high-quality recordings	Assess practical issues concerning multimedia and prepare and choose solutions		5
d. Apply editing, mixing, and mastering techniques to audio projects.	Apply relevant methods and tools within concept development, design, planning, realization and management of multimedia productions		5
e. Develop critical listening skills and audio production aesthetics.	Demonstrate effective written, oral, and visual communication skills		5

KEY	Institutional Student Learning Outcomes [ISLO 1 – 5]
ISLO #	ISLO & Subsets
1	**Communication Skills** Oral [O], Written [W]
2	**Critical Thinking**

	Critical Analysis [CA], Inquiry & Analysis [IA] , Problem Solving [PS]
3	**Foundational Skills** *Information Management [IM], Quantitative Lit, /Reasoning [QTR]*
4	**Social Responsibility** *Ethical Reasoning [ER], Global Learning [GL],* *Intercultural Knowledge [IK], Teamwork [T]*
5	**Industry, Professional, Discipline Specific Knowledge and Skills**

J. APPLIED LEARNING COMPONENT:

Yes	x
No	

If yes, select [X] one or more of the following categories:

Classroom / Lab		Community Service	
Internship		Civic Engagement	
Clinical Practicum		Creative Works/Senior Project	x
Practicum		Research	
Service Learning		Entrepreneurship [program, class, project]	

K. TEXTS: *The Recording Engineer's Handbook, The Mixing Engineer's Handbook, The Mastering Engineer's Handbook* by Bobby Owsinski, 5th ed.

L. REFERENCES:

M. EQUIPMENT: Access to DAW (Logic Pro, GarageBand), microphones, recording studio classroom. Requires personal wired headphones.

N. GRADING METHOD: A-F

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

Recording Project
Mixing Project
Sampling Project
Remixing Project

P. DETAILED COURSE OUTLINE:

I. Introduction to Digital Audio
- Basic sound theory: frequency, amplitude, and waveform
- Introduction to Digital Audio Workstations

II. Audio Interfaces and Signal Flow
- Understanding audio interfaces and their role in recording
- Signal Flow: from sound source to DAW

III. Microphone Types and Techniques
- Dynamic, Condenser, and Ribbon microphones

- Microphone placement

IV. Recording Formats and Resolution
- Bit depth and sample rate
- Audio file formats: WAV, AIFF, MP3, etc.

V. Basic Editing Techniques in DAWs
- Cut, Copy, Paste, Fade and Crossfade
- Non-Destructive Editing and Multitakes

VI. Introduction to MIDI and Virtual Instruments
- Understanding MIDI and its applications in recording
- Using virtual instruments and MIDI controllers in a DAW

VII. Mixing Fundamentals I
- Levels and Panning
- EQ

VIII. Mixing Fundamentals II
- Dynamics Processing: compressors, limiters and gates
- Reverb and delay effects

IX. Advanced Mixing Techniques
- Automation
- Buses, Sends, and Signal Splitting

X. Mastering Basics
- Mastering Process overview
- Loudness, dynamic range, and mix distribution

XI. Acoustics and Monitoring
- Understand room acoustics and impact on recording and mixing
- Field recording basics

XII. Recording Live Instruments and Vocals
- Techniques for recording acoustic instruments and vocals
- Common Recording challenges

XIII. Sampling and Foley
A. Creating sound effects and foley
B. Chopping samples and mapping

Q. LABORATORY OUTLINE: NA