

RAT-1311: STUDIO OPERATIONS

Cuyahoga Community College

Viewing: RAT-1311 : Studio Operations

Board of Trustees:

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Academic Term:

2016-08-22

Subject Code

RAT - Recording Arts & Technology

Course Number:

1311

Title:

Studio Operations

Catalog Description:

Theory and practical applications of the recording studio. Topics include equipment setup and interface, small console signal flow and operating levels, patch bays, studio documentation, basic voice and commercial recording, editing and mixing techniques.

Credit Hour(s):

3

Lecture Hour(s):

1

Lab Hour(s):

4

Requisites

Prerequisite and Corequisite

ENG-1010 College Composition I, or ENG-101H Honors College Composition I, and MATH 1000-level or higher, and MUS-1010 Survey of European Classical Music, or MUS-1020 Survey of Jazz , or MUS-1030 Survey of Rock and Roll , or MUS-1040 Survey of African-American Music , or MUS-1050 Survey of World Music , and concurrent enrollment in RAT-1300 Introduction to Recording , and departmental approval.

Outcomes

Course Outcome(s):

Operate a music workstation computer.

Objective(s):

1. Demonstrate file management and navigation techniques.
2. Configure computer system preferences.
3. Configure Audio/Midi setup.
4. Demonstrate appropriate file naming techniques.

Course Outcome(s):

Operate a small-format recording console.

Objective(s):

1. Demonstrate usage of console channel direct outputs.
2. Demonstrate usage of console master section.
3. Demonstrate usage of split board console configuration.
4. Demonstrate usage of console input section.
5. Demonstrate usage of console equalizers.
6. Demonstrate usage of console insert sends/returns.
7. Demonstrate usage of console auxiliary sends.

8. Demonstrate usage of console bus routing matrix.

Course Outcome(s):

Demonstrate analog patchbay usage.

Objective(s):

1. Interpret patchbay normalizing schemes.
2. Manipulate patch cables in order to route audio signal through patchbay to and from workstation equipment.
3. Differentiate between signal input and output patchpoints.
4. Identify input/output patchpoints of workstation equipment.

Course Outcome(s):

Operate digital audio workstation (DAW) software.

Objective(s):

1. Modify DAW session setup dialog window(s).
2. Demonstrate DAW track creation.
3. Demonstrate DAW track naming.
4. Demonstrate internal/external DAW signal routing.
5. Employ situational appropriate DAW editing modes.
6. Employ situational appropriate DAW editing tools.
7. Employ situational appropriate DAW editing techniques.
8. Modify DAW input/output setup window.
9. Modify DAW buffer settings.
10. Modify DAW playback engine.
11. Manipulate basic DAW automation.
12. Demonstrate importing audio and video files.
13. Demonstrate exporting audio and video files.
14. Demonstrate internal/external mix layback techniques.
15. Manipulate DAW time ruler settings.
16. Modify DAW session frame rate and synchronization settings.

Course Outcome(s):

Demonstrate basic recording techniques.

Objective(s):

1. Modify microphone placement for recording.
2. Demonstrate signal routing from recording booth to DAW.
3. Identify appropriate audio signal recording levels.
4. Demonstrate signal routing from DAW to control room monitors/headphones.
5. Demonstrate signal routing from workstation to recording space (cue/talent headphone mix).
6. Communicate effectively with recording talent via talkback to ensure optimal recording outcomes.
7. Complete appropriate media clearance forms.

Course Outcome(s):

Apply critical listening skills.

Objective(s):

1. Identify intentional and unintentional audio signal distortion.
2. Differentiate instrumentation in recorded music.
3. Identify frequencies and frequency ranges.

Course Outcome(s):

Complete studio documentation procedures.

Objective(s):

1. Complete equipment parameter recall documentation.
2. Complete media clearance forms.
3. Interpret session input sheets.

Methods of Evaluation:

1. Written exams
2. Lab practicals
3. Student projects
4. Student punctuality
5. Student participation

Course Content Outline:

1. Studio orientation
 - a. Personnel responsibilities
 - b. Documentation
 - i. Clearance forms
 - ii. Input sheets
 - iii. Recall sheets
2. Music workstation computer
 - a. File management
 - b. Mac OS Finder
 - c. Network Drive access
 - d. Recording Arts Technology (RAT) File naming
 - e. Mac OS sound preferences
3. Small format recording consoles
 - a. Console channel strip components
 - i. Console input section
 - ii. Console eq (shelving, parametric, semi-parametric, filters)
 - iii. Console inserts and auxes (serial routing, parallel routing, cue send routing)
 - iv. Console routing matrix
 - v. Console direct outputs
 - vi. Console master section
 - b. Channel gain staging
 - c. Console input/monitor path analog signal routing
 - i. Split board techniques
 - d. Console mixing techniques
 - e. Zeroing the console
4. Digital studio configuration
 - a. Audio interface components
 - b. Audio Interface setup
 - i. Cue mix software
5. Basic DAW software features
 - a. DAW session creation parameters
 - i. Session sample rate
 - ii. Session bit depth
 - iii. Session audio file types
 - b. DAW session configuration parameters
 - i. Playback engine
 - ii. I/O Setup
 - iii. Buffers and latency
 - iv. Playback engine
 - c. DAW track creation and naming
 - d. Basic DAW editing
 - i. Editing modes
 - ii. Editing tools
 - iii. Fades and crossfades
 - iv. Time ruler
 - e. Using DAW inserts and auxes
 - i. Serial routing with plug ins
 - ii. Parallel routing with plug ins
 - iii. Creating "in the box" cue mixes

- f. Using DAW automation
 - i. Writing automation
 - ii. Drawing automation
 - iii. Reading automation
 - g. DAW Session file management
 - i. Session folder contents
 - ii. Exporting audio files
 - iii. Save, save as & save copy in
 - iv. Importing/exporting audio and video files
 - h. Working with video
 - i. Frame rates
 - i. Music Instrument Digital Interface (MIDI) basics
 - i. Midi events
 - ii. General MIDI
 - j. Basic mixing “in the box” and hybrid mix techniques
 - i. Bounce to disk techniques
 - ii. Mix layback techniques
 - iii. Mix stems in video production
 - iv. Mix stems in music production
6. Analog patchbay basics
- a. Patchbay routing
 - i. Routing to audio interface from the console
 - ii. Routing from audio interface to the console
 - b. Patchbay normaling
 - c. Patchpoint identification
7. Basic audio recording skills and techniques
- a. Recording line level audio from external source
 - b. Recording mic level audio from booth
 - c. Analog signal routing
 - d. Talkback setup and procedures
 - e. Audio signal gain staging
 - f. Audio signal level setting
 - g. Working and communicating with talent

Resources

Bartlett, Bruce and Bartlett, Jenny. *Practical Recording Techniques The Step By Step Approach to Professional Audio Recording*. 6th. New York: Focal Press, 2013.

Huber, David M. and Runstein, Robert E. *Modern Recording Techniques*. 8th. New York: Focal Press, 1994.

White, Paul, ed. *Basic Music Techniques*. 1st ed. London: Sanctuary Publishing Ltd., 2000.

White, Paul, ed. *Basic Mixer*. 1st ed. London: Sanctuary Publishing Ltd., 2000.

White, Paul. *Desktop Digital Studio*. 1st ed. London: Sanctuary Publishing Ltd., 2000.

Alten, Stanley R. *Audio In Media*. 10th Ed. Boston: Cengage Learning, 2014.

Resources Other

1. Instructor supplemental Blackboard site.

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