

# RAT-1300: INTRODUCTION TO RECORDING

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## Cuyahoga Community College

**Viewing: RAT-1300 : Introduction to Recording**

**Board of Trustees:**

2016-05-26

**Academic Term:**

2016-08-22

**Subject Code**

RAT - Recording Arts & Technology

**Course Number:**

1300

**Title:**

Introduction to Recording

**Catalog Description:**

Introduction to theory of sound and recording process. Study of audio terminology, principles of sound and hearing, basic equipment, recorder operation, analog and digital signal storage methods.

**Credit Hour(s):**

3

**Lecture Hour(s):**

3

## Requisites

**Prerequisite and Corequisite**

ENG-1010 College Composition I or ENG-101H Honors College Composition I, and MATH-1000-level MATH course 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-1311 Studio Operations, and departmental approval: admission to program admission to program.

## Outcomes

**Course Outcome(s):**

Apply knowledge of audio terminology, principles of sound and hearing, basic equipment, recorder operation, and analog and digital signal storage methods when working in a recording studio.

**Objective(s):**

1. Explain the characteristics of sound and audio terminology.
2. Identify and describe project studio signal flow.
3. Identify and describe audio mixer signal flow.
4. Describe digital recording theory and recording methods.
5. Describe the analog recording theory and recording methods.

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**Methods of Evaluation:**

1. Participation and discussion
2. Written assignments
3. Exams covering assigned reading and lecture material

**Course Content Outline:**

1. Characteristics of sound
  - a. Fundamental waveform characteristics
  - b. Timbre

- c. Sound envelopes
  - d. Sound spectrum by octave band
  - e. Comparing frequencies to musical instrument ranges
  - f. Polarity
  - g. Fletcher-Munson curve
  - h. How the ear reacts to sound
  - i. Masking
  - j. Basic audio terminology
2. Audio signal flow
- a. Console block diagram symbols
  - b. Console parts
  - c. Audio connectors
  - d. Console signal flow
  - e. Buss and pan system
  - f. Input types
  - g. Console send/receive system
  - h. Console side chain (insert) system
  - i. Patch bay wiring types
  - j. Patch bay legend use
3. Digital recording principles
- a. Fundamental digital audio principles
  - b. Digital recording process
  - c. Digital recorder types
  - d. Rotating-head Digital Audio Recorder (R-DAT) operation
  - e. Compact disc types
  - f. New technologies
4. Analog recording principles
- a. Analog recorder operation
  - b. Head placement
  - c. Bias and equalization
  - d. Record head adjustments
  - e. Track configurations
  - f. Transport controls
  - g. Tape construction
  - h. Tape problems

## Resources

Bartlett, Bruce and Bartlett, Jenny. *Practical Recording Techniques: The Step-by-Step Approach to Professional Audio Recording*. 6th ed. Waltham, MA: Focal Press, Taylor Francis Group, 2013.

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Alten, Stanley. *Audio In Media*. 10th ed. Boston, MA: Wadsworth Cengage Learning, 2014.

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Huber, David M. and Runstein, Robert E. *Modern recording techniques*. 8th edition. Indianapolis: Sams, 2014.

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"EQ"

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"Recording"

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"RAT-1300 Course Learning Pack"

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