

JPHC 751:

**Digital Audio Tools and Techniques for Animation**

2 credits. Lecture one hour/wk. Laboratory 2 hrs./wk.

Fall 2001

Rochester Institute of Technology  
School of Film and Animation

Instructor: **Skip Battaglia** (Carl F. Battaglia), Professor.

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*"There are six essentials in painting. The first is called **spirit**; the second, **rhythm**; the third, **thought**; the fourth, **scenery**; the fifth, **the brush**; and the last is **the ink**."*

Ching Hao, 925 A.D.  
"Notes on Brushwork."

Course description: Students in this course learn the technical and aesthetic concerns which inform the recording and editing of sound in animated motion pictures. Laboratory work focuses on recording and editing sound in digital form.

Course Objectives: Upon the completion of this course the student will:

1. have a working knowledge of sound recording tools and techniques.
2. be able to operate a computer based digital audio editing system.
3. have an understanding of the aesthetic uses of sound in motion pictures.

Course Outline:

1. Overview of recording and editing tools.
2. Basic acoustics.
3. Microphones and microphone placement.
4. Working with voice actors.
5. Editing dialogue.
6. Synchronization schemes.
7. Noise and noise reduction.
8. Working with sound effects.
9. Working with music.

Rationale: Previous versions of the computer animation curriculum have only touched upon the dimension of sound in the most superficial way. This was because time constraints did not allow students to master the difficult art of 16mm film audio recording, transferring and editing. Now that a much more accessible and powerful set of

techniques is available in the form of digital audio editing, students can be more easily instructed in this important area of motion picture art and technique.

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Recommended Texts:

readings on ProTools.

SoundEdit 16: Macromedia User's Guide, version 2.

R. Murray Schafer; The Tuning of the World: Toward a Theory of  
Soundscape Design; Univ. Pennsylvania Press (1980).

Michel Chion; Audio-Vision, Sound on Screen; Columbia Univ. Press (1994).

Rick Altman, ed.; Sound Theory; Sound Practice; Routledge (1992).

Elizabeth Weis and John Belton, eds; Film Sound: Theory and Practice; Columbia  
University Press (1985).

various technical texts on field sound recording and studio sound mixing.

Class Projects:

**PROJECT 1: Sound recording** of three separate sounds for sound replacement into a hypothetical movie.

DUE in class **Sept. 20.**

This short (two-week?, three week?) project is designed to make you aware of sound, ways to capture sound to tape, and opportunities to use sound in expressive ways. **Three** different sound effects are to be recorded as if they were to be inserted into a (hypothetical) movie. Guidelines for the sound are:

1. Sounds are to be recorded from the natural world, including effects produced for microphone capture by participants. No pre-recorded sound effects may be used.
2. No music is to be used, although a musical instrument may be employed to produce a sound which will be appreciated in a non-musical way.
3. No voice-overs or dubbed words, but a non-verbal voiced sound may be used for effect.
4. Sound is to be delivered to class on audio cassette, cued to the section which you are to play. Each sound should play for at least ten seconds to give the class time to appreciate it. If your sound is short (and most will be), repeat the sound for ten seconds.
5. In class you must explain how you captured the sound.

We will listen to all of the sounds in class and guess what they are recorded from and for what screen actions in our hypothetical movie they might be cut into the soundtrack to support.

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**PROJECT 2: Edited conversation.** DUE in class **Oct. 11.**

You must script a short conversation between two people or among no more than three people. This conversation must be edited for maximum informational effect.

Guidelines:

1. Script may be of your own design or may have arisen from an "overheard conversation". Dialogue should be snappy and there should be an outcome to the script.
2. Finished sound edited conversations 30 (min.) to 60 seconds (max.).
3. You may insert sound effects into the conversation if you feel confident in doing so at this point and if they assist the narrative, but it is not required.
4. **The conversation need not tell a complete story, or any story.** In fact, students who have too much content in their edited sound often have weaker final projects. The sound and dialogue should emotionally create a narrative atmosphere.
5. Sound is to be played in class from cued audio cassette.

**PROJECT 3: Sensory Haiku.** DUE in class **Oct. 25.**

In this project you will create one single extended sound of **exactly 30 seconds** which has multiple layers of processed and crossfaded/mixed sound and which creates an emotional effect. Guidelines:

1. Sounds may be from multiple sources: microphone, CD sound effect, LP or tape "needle drop".
2. Sounds are to be processed through filters, reversed, speeded, slowed, fragmented and re-edited and resynthesized as best benefits your project's purpose.
3. Sound must have a purposeful duration and conclusion. It must feel as if it is to be 30 seconds, no more, no less. The sound must arrive at a conclusion which seems logical or emotionally correct.

4. All projects are to be evaluated in class and discussed.

PROJECT 4: **Sound Poem.** DUE in class Nov. 8 (final class meeting).

This final project is an atmospheric, environmental, ambient, or *musique concrete* sound production. It may be a soundtrack for an intended film. It may include music. It must be at least 60 seconds in length, or somewhat longer if you so desire.

Guidelines will be developed as we define the class together. For now:

1. It must include processed and redefined sound.
2. It must have a fitting title which clues the audience response.

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3. The entire work must be **cohesive**. By "cohesive" I mean:

*that it has no extraneous parts or wasted sound signatures; that it be technically accomplished; that it refers to the world that it purports to describe; and that it be as honest, conscious, and beautiful as you can make it.*

Course Evaluation:

10% Project 1  
20% Project 2  
25% Project 3  
35% Project 4  
10% class participation  
100% TOTAL

P.S. This is an experiential class, designed for the incoming animation student. It is kept small enough to be flexible and personal in its approach. We may get new software in the middle of this quarter, and this will change some methods of working, but not the assignments. Your input and our considered adjustments to the material and the technology will shape the syllabi of future courses in audio for film animation. We rise and fall together.

