

Introduction to Music Technology I

MUS 130 01

Wednesday & Friday 3:00 p.m. – 3:50 p.m.

2 credits

Location: Benildus 238 (Composition Studio)

Instructor: Steven M. Miller

Office: Benildus 237

Phone: x6197

Email: smill@csf.edu

www: <http://pubweb.csf.edu/~smill>

Midterm Exam Study Guide

The midterm exam will consist of questions and sample problems related to the course content thus far in the semester. You should be able to provide brief definitions of key terms and concepts, and apply them in explaining/solving problems. A list of representative terms, concepts, etc., follows, sorted by course topic.

Acoustics

- Compression

- Rarefaction

- Longitudinal wave

- Wave propagation

- Wavelength

- Frequency

- Amplitude

- Wave shape

- Refraction

- Reflection

- Superposition

- Standing wave

- Resonant frequency

- Harmonic series

- Harmonic

- Overtone

- Partial

- Phase

- Speed of sound

- Linear vs. logarithmic perception/response

- Subjective vs. objective attributes of sound

 - Pitch & frequency

 - Loudness & amplitude

 - Timbre & spectrum, dynamic envelope, waveform

Electricity

- Voltage
- Resistance
- Current
- Ohm's Law ($E=I \cdot R$)
- Alternating Current
- Direct Current

Transducers

- Transducer

- Speakers

 - Cone

 - Voice Coil

 - Magnet

 - Polarity

- Microphones

 - Element type

 - Dynamic/Moving Coil Mics

 - Condenser Mics

 - Ribbon Mics

 - Pressure mics

 - Pressure gradient mics

 - Polar response pattern

 - Omni-directional

 - Uni-directional

 - Cardioid

 - Hyper-cardioid

 - Figure 8

 - Frequency response

 - Transient response

 - Phantom power

Mixing consoles

- Signal/audio path

- Monitor path

- Input section

 - Input trim

 - Mic/Line input selector

 - Channel fader

 - Output assign

 - EQ

 - Aux send

- Output section

 - Bus Fader

 - Master L/R Mix fader

- Monitor section

 - Monitor volume pot

 - Monitor source selector

- Auxilliary section

 - Aux send master

 - Aux returns

Mute function

Solo function

Gain structure

Cables & Connections

Unbalanced

Balanced

Mono

Stereo

1/4" jack/plug (phone)

1/8" jack/plug (mini)

TRS

TS

RCA jack/plug (phono)

XLR jack/plug

RF interference

Common Mode Rejection Ratio (CMRR)

Ground hum

Patchbay

 Normalled connections

 Non-normalled connections

 Multiples (mults)

Amplifiers

Power amps

Mic pre-amplifiers

Unity gain amplifiers

 Summing amplifiers

 Splitting amplifiers

 Buffer amplifiers

Voltage controlled amplifiers