**AUDIO120**
**DIGITAL AUDIO I**

**COURSE LEARNING OUTCOMES (CLOs)**

1. Define the relationship between sample rate and frequency response, and bit depth and dynamic range in a digital audio recorder.
2. List components of different types of digital audio workstations and explain functions of each.
3. Demonstrate basic computer file management skills by being able to save and copy Pro Tools files on Mac and Windows operating systems.
4. List audio, video and MIDI file types compatible with digital audio workstations and examine the differences between each. Import these files into sessions.
5. Demonstrate ability to record audio into Pro Tools sessions, perform basic cut, copy and paste edits and then mix down to a stereo delivery format.
6. Demonstrate ability to set up sessions for MIDI recording using virtual instruments. Demonstrate ability to record MIDI into Pro Tools sessions and edit MIDI data using basic quantize operations.

**COURSE OUTLINE**

I. Intro to Digital Audio Workstations
- A. Evolution of Pro Tools Hardware and Software
- B. Pro Tools Certification Overview
- C. Digital Audio Theory
  - 1. Sampling
  - 2. Quantization
  - 3. Nyquist Theorm
- D. Pro Tools Systems Explained
  - 1. LE
  - 2. M-Powered
  - 3. HD

II. Operating Systems
- A. Mac OS X
  - 1. File Management
  - 2. Common Quick Keys
- B. Windows XP
  - 1. File Management
  - 2. Common Quick Keys

III. Pro Tools Sessions – The Basics
- A. File Structure
- B. Basic Windows
  - 1. Edit Window Functions
  - 2. Mix Window Functions
- C. Menu Items

IV. Editing Basics
- A. Edit Tools Explained
- B. 4 Edit Modes Explained
- C. Importing Audio Files
    1. Audio file Types (compressed/ uncompressed)
    2. Compatibility Issues

V. Creating a New Session
- A. Creating Tracks
- B. Audio/ MIDI Recording Options
    1. Hardware Connections
    2. I/O Set Up Overview
    3. Recording Modes
- C. Audio Recording Basics
    1. Naming Audio Files
    2. Audio Regions vs. Whole-Files
- D. Managing Regions
    1. Region List Menu
    2. Deleting Tracks and Regions

VI. MIDI Basics
- A. MIDI Track Functions
- B. Instrument Tracks
- C. MIDI Routing Overview
- D. Basic MIDI Operations

VII. Mixing Basics
- A. Signal Routing in Pro Tools
    1. Creating and Using Aux Tracks
    2. Overview of Inserts
- B. Basic Automation
    1. Recording Automation
    2. Updating Mix Automation
- C. Bounce to Disk

<u>WORKLOAD EXPECTATION STATEMENT</u>

The average student will spend 55 hours in a lecture. The student is also expected to spend approximately 110 hours in independent lab work and studying written materials in preparation for class, lab, exams and other forms of student learning evaluation.