BASIC ACOUSTICS & RECORDING HISTORY
Course Syllabus

Course Number: RAPA-0182
OCAS Code: None
Course Length: 45 Hours
Career Cluster: Arts, A/V Technology & Communications
Career Pathway: Audio & Video Technology
Career Major(s): Cinematography & Recording Arts Production Assistant

Pre-requisite(s):
The course covers sound effects and history.

Textbooks:
- Pro Tools, Version 8, DigiDesign (2009)

Course Objectives:
A. Demonstrate Acoustics and Hearing Fundamentals.
   1. Describe components of the ear.
   2. Define auditory perception.
   3. Demonstrate beats.
   4. Define combination tones.
   5. Discuss perception of direction.
   6. Experience reverberation.
   7. Address basic wave transmission and generation.
   8. Contrast sine wave and square wave.
   9. Demonstrate amplitude.
  10. Demonstrate frequency (hertz).
  11. Demonstrate the effects of velocity.
  12. Demonstrate effects of wavelength.
  13. Demonstrate s phase.
  14. Demonstrate harmonic content.
  15. Demonstrate envelope.
  16. Define a decibel.

B. Discuss the History of Sound Engineering.
   1. Appreciate the impact of Alexander Graham Bell.
   2. Discuss the physics of two cups and a string.
   3. Describe the early microphones.
   4. Exhibit knowledge of audio formats.¹
      a. Discuss early recording methods (analog).
      b. Discuss digital recording.
      c. Contrast digital versus analog.
   5. Discuss early Pro Tools.

¹ODCTE objective
All unmarked objectives are TTC instructor developed.
Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance. 2. Each course must be passed with seventy (70%) percent or better. 3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.

Available Certifications/College Credit: The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

College Credit Eligibility: The student must maintain a grade point average of 2.0 or better.