

# ITSC 125: PAGING SYSTEMS

## Foothill College Course Outline of Record

Heading	Value
<b>Units:</b>	0.5
<b>Hours:</b>	6 lecture, 3 laboratory per quarter (9 total per quarter)
<b>Prerequisite:</b>	Completion of recognized sound and communication apprenticeship or equivalent and recent employment as an installer/technician in the sound and communication industry.
<b>Degree &amp; Credit Status:</b>	Degree-Applicable Credit Course
<b>Foothill GE:</b>	Non-GE
<b>Transferable:</b>	None
<b>Grade Type:</b>	Letter Grade (Request for Pass/No Pass)
<b>Repeatability:</b>	Not Repeatable

## Description

Covers the essentials of paging systems, including functionality, components and how to wire/install.

## Course Objectives

The student will be able to:

- Identify the components associated with paging systems
- Explain the function of a paging system
- Describe the difference between a constant voltage system and a self-amplified system
- Explain how a constant voltage system works
- Explain how the power ratings of an amplifier are important
- Explain the difference between direct connection and transformer connection
- Explain how sound masking systems work
- Install a paging speaker in a ceiling tile with proper seismic support

## Course Content

- Introduction (Lec)
  - Transformers (Lec)
    - Primary and secondary
    - Step-up
    - Step-down
    - Power transfer
- Amplifiers (Lec)
  - Construction
  - Inputs
  - Mixer
  - Output terminals
  - Classes
  - Power
- Speakers (Lec)
  - Transducer
  - Construction
  - Phase
  - Types
  - Frequency response

- Taps
- Impedance (Lec)
  - Impedance matching
  - Wattage
  - Impedance bridge
- Ambient Noise (Lec)
  - dB
  - SPL weighting
  - 3dB and 6dB rules
- Volume Controls (Lec)
  - Attenuators
  - Impedance changes
  - Logarithmic
  - Audio taper
- Sources (Lec)
  - Microphones
  - Music source
  - Recorder
- Zone Paging (Lec)
  - Groups
- Sound Masking (Lec)
  - Privacy/concentration
  - White noise
  - Pink noise
  - Reduce intelligibility of speech
- Paging System Lab (Lab)
  - Seismic support
  - Speaker install
  - System wiring
  - Install volume controls
  - Test and commission system

## Lab Content

- Work individually and in teams with basic tools of the trade, test instruments and tool safety.
- Included will be the installation of sound and/or communication devices using shielded, and unshielded twisted pair cables.
- Equipment safety and safe handling practices are reviewed and applied.

## Special Facilities and/or Equipment

- Paging system lab, to include paging amplifier, various speakers, wiring, and microphone.
- When taught via Foothill Global Access, on-going access to email software and hardware; email address.

## Method(s) of Evaluation

- Results of assessments
- Results of quizzes and tests
- Discussion participation

## Method(s) of Instruction

- Lecture
- Group discussion
- Demonstration
- Lab

## **Representative Text(s) and Other Materials**

Handouts and/or worksheets provided by course instructor.

## **Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments**

A. Reading assignments:

1. Read lab guide and follow directions

B. Writing assignments:

1. Complete the lab handout by filling in the answers and completing the summary

## **Discipline(s)**

Telecommunication Technology