

# ITSC 128: NETWORK VIDEO

## Foothill College Course Outline of Record

Heading	Value
<b>Units:</b>	1
<b>Hours:</b>	14 lecture, 7 laboratory per quarter (21 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 basic networking, components, and installation of network video systems.

## Course Objectives

The student will be able to:

- Identify various network architectures
- Identify various network hardware
- Describe the most basic components needed for a CCTV system
- Identify major components for a network video system
- Explain various video compression technologies
- Describe what PoE is and what it does

## Course Content

- Basic Networking (Lec)
  - Introduction
  - Binary, bit, byte
  - OSI module
  - Networking components
  - Switches
  - PoE classes
  - TCP/IP
  - IP addressing
  - Troubleshooting techniques
- Network Video (Lec)
  - Introduction
  - Evolution
  - Components
  - Network cameras
  - Camera technologies
  - Thermal cameras
  - Video compression technologies
  - Video encoders
  - Installation
  - Network bandwidth
- Network Video Lab (Lab)
  - Network installation

- IP camera installation

## 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.
- Equipment safety and safe handling practices are reviewed and applied.

## Special Facilities and/or Equipment

- Networking equipment and IP cameras as needed during hands-on lab.
- When taught via Foothill Global Access, on-going access to email software and hardware; email address.

## Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

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

## Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

- Lecture
- Group discussion
- Demonstration
- Lab

## Representative Text(s) and Other Materials

National Joint Apprenticeship and Training Committee (NJATC). [Network Technologies](#). MD: NJATC Publishers, 2016.

Nilsson, Fredrik, Axis Communications. [Intelligent Network Video](#). New York: Taylor & Francis Group, 2017.

NOTE: These are the standard Sound & Communications textbooks/ workbooks used for this course. Although one or more may not be within 5 years of the required published date, they are the most current books used when teaching this course. We will adopt the next edition of each text, as it is published.

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

- Reading assignments:

- Read [Intelligent Network Video](#): section 9.6 (pg. 165)

2. Read [Intelligent Network Video](#): section 17.1.3 (pg. 301)

B. Writing assignments:

1. In your own words, explain PoE and what it does; include the benefits of using PoE

2. Describe the difference between recognition and identification. Include the range of pixels required. Describe a feature that some cameras have that makes it easier to tell if you have the correct resolution for identification

## **Discipline(s)**

Telecommunication Technology