

ITSC 128: NETWORK VIDEO

Foothill College Course Outline of Record

Heading	Value
Units:	1
Hours:	14 lecture, 7 laboratory per quarter (21 total per quarter)
Prerequisite:	Completion of recognized sound and communication apprenticeship or equivalent and recent employment as an installer/technician in the sound and communication industry.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	None
Grade Type:	Letter Grade (Request for Pass/No Pass)
Repeatability:	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

- 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

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

A. Reading assignments:

- Read [Intelligent Network Video](#): section 9.6 (pg. 165)
- Read [Intelligent Network Video](#): section 17.1.3 (pg. 301)

B. Writing assignments:

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