ABA Engineering Academy – Television Engineering Class

updated 11/1/13

Basic Electronics…
a. Electron flow
b. Ohms Law
c. Resistors, Capacitors, Inductors
d. DC versus AC basics
e. Frequency and Wavelength
f. Power basics
g. Reactance
h. Vacuum Tube theory
i. Transistor theory
j. Logic Gates
k. Binary, hexadecimal numbers
l. Basics of IT in Broadcasting

Audio Fundamentals
a. Basics of sound
b. Microphones, types and patterns
c. Microphone placement
d. Audio flow in studio
e. Console design and operation
f. Automation systems
g. Basics of Satellite operations
h. Processors
i. Stereo generation (5.1 audio)
j. Audio levels and meters
k. Digital audio basics

Television Transmission
a. History of Television Broadcasting
b. Basics of NTSC transmission
c. Basics of Color generation
d. Signal flow in Broadcast Operation
e. Digital Television overview
f. Creation of digital transport stream
g. Basics of PSIP
h. MPEG compression
i. 8VSB modulation
j. Television transmitters (solid state and IOT)
k. Transmission line and antenna
l. Discussion of standing Waves

Station Operation

a. FCC Rules and Regulations
b. EAS Operations
c. Safety Issues
d. Engineering Management
e. Basic maintenance items and schedules
f. Review of basic formulas used in Broadcasting