

Bemidji State University

MASC 4330: Engineering for Electronic Media

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

A very practical "mini course" in electronic fundamentals. Explores the basic theory of how things function in a broadcast environment. Practical use and repair of audio/video connectors, components, and circuitry. Reading of instruments, levels, and oscilloscope patterns in a television/radio studio. Techniques of soldering connectors, and cable repair used in everyday television/radio stations. Audio theory and components, as well as video signal operation. At the end of this course, students will have sufficient electronic knowledge to pass the FCC Amateur Radio license exam. This class builds confidence and understanding of broadcast operations. Lab hours required. Prerequisites: MASC 2223 or MASC 2233.

B. COURSE EFFECTIVE DATES: 08/24/2009 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. AM Antennas
2. Amateur Radio License Theory
3. Amplitude Modulation & AM Transmitters
4. Digital Audio
5. Electrical Resistance, OHM's Law, Circuit Configurations
6. FM Antennas, Tower, & Tower Lighting
7. Frequency Modulation & FM Transmitters
8. ID Plugs, Jack & Electrical Fittings
9. Inductors, Capacitors & How they Operate in Circuits
10. Metric System & Basic Math
11. Read Color Codes & Identification of Electrical Components
12. Remote Control- Metering
13. Schematics & Electrical Component Identification
14. Solid State Junction & Diode Functions
15. The EAS System
16. Theory & Understanding of AC & DC Current
17. Vacuum Tubes

D. LEARNING OUTCOMES (General)

1. have developed a general understanding of the technical side of broadcast operations.
2. be able to obtain an FCC amateur radio license at the completion of this class.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted