**COURSE SYLLABUS**

**DIVISION:** Workforce Services **REVISED**: January 2015

**CURRICULUM:** Electrical Electronics Engineering Technology

**COURSE NUMBER AND TITLE:** ETR 242, Electronic Communications I

**CREDIT HOURS: 4** **HOURS/WEEK LECTURE: 2**

**HOURS/WEEK LAB: 3** **LECTURE/LAB COMBINATION: 5**

## I. CATALOG DESCRIPTION

Studies noise, information and bandwidth, modulation and demodulation, transmitters and receivers, wave propagation, antennas and transmission lines. The course may include broadband communication systems, microwave, terrestrial and satellite, fiber optics, multiplexing and associated hardware.

## II. RELATIONSHIP OF THE COURSE TO CURRICUUM OBJECTIVES

The course applies basic circuits to systems, which produced amplitude, and frequency modulated signals for the purpose of transmitting intelligence. Basic circuits are integrated into transmission and receiving systems. The course relates applicable theory to Federal Communication Commission regulations.

## III. REQUIRED BACKGROUND/PREREQUISITES/COREQUISITES:

Student must have completed all courses in the first three terms of the Analyst Electronics program or have the instructor's approval.

## IV. COURSE CONTENT:

1. Systems concepts
2. Power supplies
3. Oscillators
4. Amplifiers
5. Modulators
6. Transmission lines
7. Antennas
8. Regulations

V. **LEARNER OUTCOMES :** **VII. EVALUATION:**

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|---|---|
| Demonstrate an understanding of systems concepts | Written quizzes and tests<br>Oral and written reports<br>Homework and projects |
| Demonstrate an understanding of power supplies | |
| Demonstrate an understanding of oscillators | |
| Demonstrate an understanding of amplifiers | |
| Demonstrate an understanding of modulators | |
| Demonstrate an understanding of transmission lines and antennas | |
| Demonstrate an understanding of measurement devices such as meters and oscilloscopes. | |
| Demonstrate an understanding of schematic reading, troubleshooting communication systems | |

**VII. The course supports the following general education goals/objectives:**

DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning