

# Louisiana Delta Community College

## Academic Affairs Master Syllabus

**Course Name:** LOGIC FUNCTIONS

**Course Number:** ELEC 2540

**Credit Lecture hours:** 0    **Credit Lab Hours:** 2    **Contact Hours:** 90

**Textbook, Author, and Publisher:** To be provided by College Campus

**Instructor Information:** To be provided by College Campus

**Class Location:** To be provided by College Campus

**Course Description:** An introduction to the uses and applications of logic technology. The course utilizes test equipment and schematic diagrams to troubleshoot and repair circuits while practicing safety procedures.

**Prerequisites:** Basic Electricity (ELEC 1120)

**Co-requisites:** None

### **Learning Outcomes:**

On completion of this course, the student will be able to:

1. Perform conversions of various numbering systems.
2. Analyze various types of digital integrated circuits.
3. Analyze NOT, OR, AND, NAND, and NOR logic gates.
4. Analyze Exclusive OR and Exclusive NOR logic gates.
5. Describe Boolean operations and logic
6. Demonstrate the use of Reset-Set (RS), Data (D), and JK flip-flops.
7. Demonstrate the principles of binary counters.
8. Demonstrate the principles of shift registers.
9. Demonstrate the operations of clock and timing circuits.
10. Demonstrate the operations of binary encoders and decoders.
11. Demonstrate the operations of digital display circuits and devices.
12. Describe the conversions of digital to analog (D-A) and analog to digital (A-D) circuits.
13. Demonstrate the operation of digital arithmetic-logic circuits.
14. Identify the principles and types of multiplexer and demultiplexer circuits.

**Assessment Measures:** To be provided by the College Campus.

**Library Resource Center:**

The Delta Library and Learning Resource Center is committed to providing quality information and learning resources and services, including technology, in supporting the overall mission of Delta Community College and its commitment to lifelong learning.

**Special Accommodations:**

Louisiana Delta Community College complies with Section 504 of the Rehabilitation Act, as well as the Americans with Disabilities Act. Students with disabilities who attend the Monroe campus may make a request by contacting the Director of Counseling and Disability Services (See College Directory for contact information.) at the beginning of each semester. Reasonable accommodations will be attempted for students with documented disabilities. If an impairment is identified later in the semester, a non-retroactive accommodation plan will be developed. Students at satellite campuses should contact the Coordinator of Student Affairs at their particular campus.

**Title IX:**

Louisiana Delta Community College is committed to protecting the rights of students, which includes compliance with Title IX requirements. As such, the institution and members of our community will not tolerate the offenses of dating violence, domestic violence, sexual assault, and stalking. Students with Title IX concerns should contact the College's Title IX Coordinator (See College Directory for contact information.) Students are required to complete Sexual Assault Awareness and Prevention Online Training. Access to this online course will be sent out through the Delta email account.

**Student Code of Conduct:**

Louisiana Delta Community College encourages an environment of academic integrity and mutual respect. Students should read and follow both academic and behavioral expectations identified in the Code of Student Conduct that can be found online at [www.ladelta.edu](http://www.ladelta.edu). Students are expected to act with integrity, respect the rights of others, and conduct themselves in a professional manner. The Honor Code prohibits academic misconduct such as cheating, engaging in unauthorized collaboration, and plagiarism. Violations of the Code of Student Conduct may result in disciplinary action as provided in the Code. Incidents are reported through the online Student Conduct system.