Course Title:　　　　　　**Programmable Controller Applications**
Prefix and Course Number:　　**ELMT 254**

Course Learning Outcomes:
By the end of this course, a student should be able to:

- Explain data moves and how they work
- Demonstrate the ability to program a variety of timers
- Start up and test systems

Course Outline:

I. Advanced Concepts of Complex Timer Logic
　　A. Programming Timers
　　　　1. pneumatic timers
　　　　2. Allen-Bradley timers
　　　　3. Westinghouse timers
　　　　4. Square D timers
　　　　5. Gould Inc. timers
　　　　6. Cascading timers
　　　　7. T.J. timers
II. Word and File Moves
　　A. Words
　　B. Synchronous Shift Registers
　　C. File Moves
　　D. Word to File Instruction
　　E. File to Word Instruction
　　F. File to File Instruction
　　G. Asynchronous Shift Register (FIFO)
III. Sequencers
IV. Startup and Troubleshooting
　　A. Startup
　　B. Testing Input
　　C. Testing Output
　　D. Final Systems Checkout
　　E. Troubleshooting
V. Programmable Controllers
　　A. Manufacturers
　　B. Models
　　C. Capabilities