1. **ECE 3510 - Engineering of Real Time Systems**

2. 3 credit hours – 3 contact hours per week

3. Dr. Ralph Tanner, Professor of Electrical and Computer Engineering

4. Real Time UML, B.P.Douglas, 2004

5. **Specific course information**
   a. Characterizing, modeling, and specifying real time systems. Designing, programming and verifying sequential and concurrent real time systems. Software engineering processes in real time system development. Case studies and project using C/C++.
   b. Prerequisites: ECE 2510 and CS 1120; with a grade of “C” or better in all prerequisites.
   c. This is a required course for Computer Engineering majors. It is an elective course for Electrical Engineering majors.

6. **Specific goals for the course**
   a. Students learn the hardware and software constraints required to produce a systems when the validity of the computation depends upon both the data and the timeliness of the computation.
   b. This course explicitly addresses outcomes B and H of the ABET requirements

7. **Brief list of topics to be covered**
   a. Object Orientation
   b. Profile of Schedulability, Performance, and Time
   c. Requirements Analysis
   d. Object Domain Analysis
   e. Architectural Design
   f. Mechanistic Design
   g. Detail Design