Based on ABET ETAC Student Learning Outcomes

1. **Course Number and Name:**
   CSET-4350 – Operating Systems
2. **Credits and Contact hours:**
   Credits: 4 hours, Contact: 2 lecture hours; 2 lab hours
3. **Instructor's or course coordinator's name:**
   Hong Wang
4. **Text book, title, author, and year:**
   Embedded Systems: Introduction to Arm® Cortex (TM)-M Microcontrollers (Volume 1), 5th Edition, Jonathan Valvano, 2012
   a. **Other supplemental materials:**
      Lab Kit: Tiva C-Series TM4C123G Launchpad from Texas Instruments
5. **Specific Course Information:**
   a. **Brief description of the content of the course (catalog description):**
      This course covers the different types of microcontrollers, their architecture and programming and lab testing and troubleshooting. Topics include: Basic Structure, Programming Fundamentals, Algorithms, I/O Interfacing, Interrupts, Communications and Development Tools.
   b. **Pre-requisites, or co-requisites:**
      EET-3150
6. **Specific goals for the course:**
   a. **Specific outcomes of instruction:**
      1. To understand basics of C programming in OOP environment
      2. To design and understand algorithms
      3. To design and understand data structures
      4. To design and understand classes
      5. To understand and debug microcomputer hardware
      6. To design and understand interfacing, program construction, testing, and troubleshooting.
      7. To work as part of a team. All students are required to do a team project for this course. Students will be required to submit a written report as well as give an oral presentation.
   b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course: 1, 2, 4**

      1. An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
      2. An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;

4. An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.

7. **Brief list of topics to be covered:**
   - New to Development
   - Programming Fundamentals
   - Algorithms and Data Structures
   - Application Development
   - Class Library Development
   - Debugger and Debugging
   - Language
   - Tools
   - LINQ