Based on ABET CAC Student Learning Outcomes

1. **Course Number and Name:**
   CSET 4150 Web System Administration
2. **Credits and Contact hours:**
   Credits: 3 hours, Contact: 3 lecture hours; 0 lab hours
3. **Instructor's or course coordinator's name:**
   Jared Oluoch
4. **Text book, title, author, and year:**
   Apache, The Definitive Guide, 3rd Edition, Ben Laurie, Peter Laurie, 2002
   a. **Other supplemental materials:**
      none
5. **Specific Course Information:**
   a. **Brief description of the content of the course (catalog description):**
      Installation and configuration of the web server operating systems (e.g., UNIX, Windows), installation and administration of Web daemon (e.g., Apache, Microsoft IIS). Site management, including file and directory hierarchy, Web log analysis, installation and configuration of various utilities for gopher, ftp, text ending and e-mail.
   b. **Pre-requisites, or co-requisites:**
      CSET 2200 and Junior Standing
6. **Specific goals for the course:**
   a. **Specific outcomes of instruction:**
      1. Install a Web server and configure it to perform a specific task.
      2. Start and restart a web server.
      3. Configure a web server to execute CGI scripts.
      4. Configure a web server to provide authentication services.
      5. Manipulate files on the web server.
      6. Redirect web services to alternate URLs.
      7. Determine the status of web servers.
      8. Read and parse server logs.
      9. Understand and describe web process for providing ssl services in a web environment.
      10. Set up mail server.
   b. **Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course: 1, 2**
      1. An ability to analyze a complex computing problem and to apply principles of computing and other relevant disciplines to identify solutions;
      2. An ability to design, implement, and evaluate a computing-based solution to meet a given set of computing requirements in the context of the program's discipline.

7. Brief list of topics to be covered:

1. How Does Apache Work? What to Know About TCP/IP. How Does Apache Use TCP/IP?
2. Apache's Flags
3. Block Directives
4. Virtual Hosts
5. HTTP Response Headers
6. Restarts, .htaccess, CERN Metafiles, Expirations
7. Common Gateway Interface (CGI), Writing and Executing Scripts, Script Directives
8. Debugging Scripts, Setting Environment Variables, suEXEC on Unix, Handlers, Actions
9. Authentication, Authentication Protocol, Authentication Directives, Passwords Under Unix, Order, Allow, and Deny, Digest Authentication
10. Anonymous Access, Automatic User Information, Using .htaccess Files, Overrides
11. MIME, Content and Language Negotiation
12. Indexing
13. Redirection
14. Proxy Server, Proxy Directives, Caching
15. Server-Side Includes
16. Server Status, Server Info, Logging
17. Authentication
18. Blocking Access, Counters, Faster CGI Programs, FrontPage from Microsoft, Languages and Internationalization, Server-Side Scripting, Throttling Connections, URL Rewriting, Miscellaneous: MIME Magic, DSO
19. Security
20. Apache-SSL
21. The Apache API
22. Writing Apache Modules