

**I. COURSE INFORMATION:**

- A. Division: Applied Technology & Transportation  
Department: Inspection Technology  
Course ID: INSPEC 018C  
Course Title: California State Energy Regulations for Non-residential Buildings  
Units: 3  
Lecture: 3 Hours  
Laboratory: None  
Prerequisite: None  
Corequisite: None  
Dept. Advisory: None
- B. Catalog and Schedule Description: Basic compliance with California Title 24 Energy Efficiency Standards for non-residential buildings. Includes prescriptive and performance methods such as alternative packages, point systems, and computers.

**II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One**

**III. EXPECTED OUTCOMES:**

- Upon successful completion of the course, the student should be able to:
- A. Analyze construction components of non-residential buildings for energy compliance.
  - B. Define the prescriptive and performance approach to compliance.
  - C. Recognize CEC mandated mandatory measures.
  - D. Explain the rationale for CEC climate zones.
  - E. Classify building types for energy purposes.
  - F. Write correction notices of deficiencies for non-complying features.
  - G. Inspect buildings for compliance with the Energy Standards.

**IV. COURSE CONTENT:**

- A. History of the Standards
  - 1. Oil Embargo of the 1970s
  - 2. Human comfort
  - 3. Economics
  - 4. Alquist-Warren Act
- B. Mandatory measures
  - 1. Fenestration
  - 2. Ceilings
  - 3. Walls
- C. Mechanical equipment
  - 1. Water heaters
  - 2. Economizer
  - 3. Forced air units
- D. Building occupancy types
- E. Computer analysis

**V. METHODS OF INSTRUCTION: (Please check all that apply and add any additional not listed.)**

- Lecture
- Class and/or small group discussion
- Critical evaluation of texts, newspapers, journal articles, and other printed research
- Critical evaluation of films, videotapes, audiotapes, or other media forms
- Classroom demonstrations
- Field trips
- Guest speakers
- Other:
- Other:

\_\_\_\_\_ Other:

**VI. TYPICAL OUT-OF-CLASS ASSIGNMENTS:**

- A. Reading Assignment. Reading assignments are required and may include (but are not limited to) the following: Read Chapter on Case Studies of the manual. Determine if the given building examples are required to comply with the Standards.
- B. Writing Assignment. Writing assignments are required and may include (but are not limited to) the following: Write a correction for a 7-Eleven store with no wall insulation installed.
- C. Critical Thinking Assignment. Critical thinking assignments are required and may include (but are not limited to) the following: Visit a local supermarket and analyze the installed glazing.

**VII. EVALUATION:**

A student's grade will be based on multiple measures of performance and will reflect the objectives explained above. A final grade of "C" or better should indicate that the student has the ability to successfully apply the principles and techniques taught in this course. These evaluation methods may include, but are not limited to, the following (Please check all that apply, and add additional ones not listed):

- \_\_\_\_\_ Portfolios
- \_\_\_\_\_ Projects
- \_\_\_\_\_ Written papers or reports
- \_\_\_\_\_ Presentations (oral and visual)
- \_\_\_\_\_ Work performance (internships or field work)
- \_\_\_\_\_ Lab work
- \_\_\_\_\_ Comprehensive examinations (cumulative finals or certifications)
- \_\_\_\_\_ Peer evaluation
- \_\_\_\_\_ Self evaluation
- \_\_\_\_\_ Classroom participation
- \_\_\_\_\_ Homework
- \_\_\_\_\_ Other:
- \_\_\_\_\_ Other:
- \_\_\_\_\_ Other:

**VIII. TYPICAL TEXTS:**

- A. California Energy Efficiency Manual for Non-residential Buildings. California Energy Commission, Sacramento, CA, 2005.
- B. Energy Workbook for Non-residential Buildings. California Energy Commission, Sacramento, CA, 2005.
- C. Energy Efficiency Standards for Residential and Non-residential Buildings. California Energy Commission, Sacramento, CA, 2005.

**IX. OTHER SUPPLIES REQUIRED OF STUDENTS:**

Three-ring binder