Course Outline

Energy, Environment, and Utilities **REVISED: August/2017**

Job Title
Energy Auditor

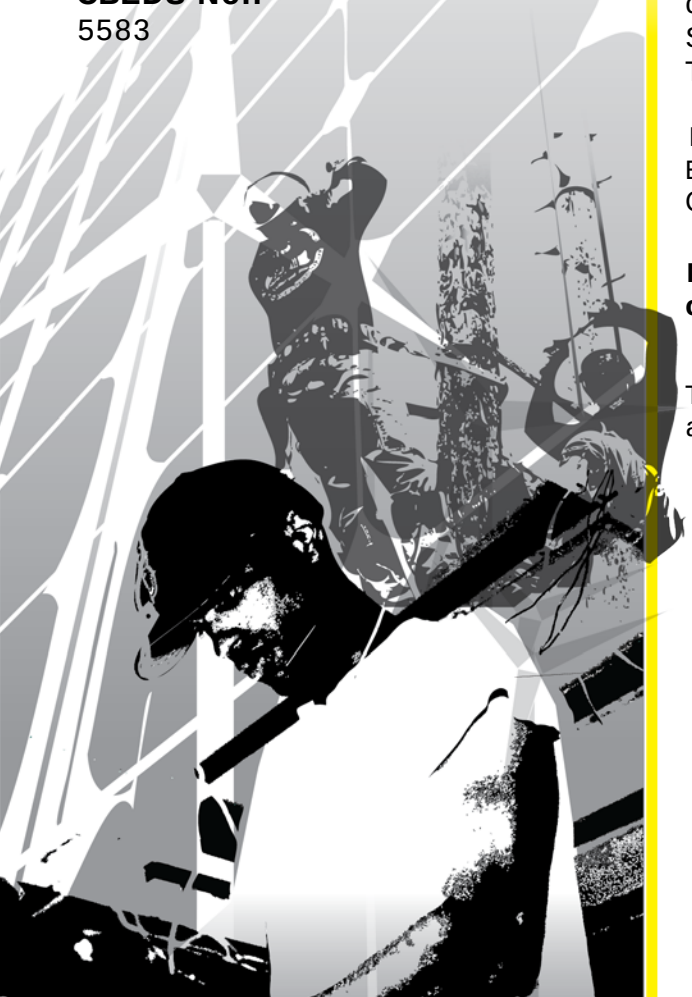
Career Pathway:
Energy and Power Technology

Industry Sector:
Energy, Environment, and Utilities

O*NET-SOC CODE:
13-1199.01

CBEDS Title:
Introduction to Electrical Power Systems

CBEDS No.:
5583



72-85-50

Energy Auditing

Credits: 5 **Hours:** 90

Course Description:
This competency-based course is designed for energy auditing. It provides students with project-based experiences in residential and commercial energy management, supply, and conservation. Technical instruction includes an orientation, workplace safety policies and procedures, and employability skills. Emphasis is placed on the principles and sources of energy, data collection for energy auditing, resource accounting for energy efficiency, establishing baselines, taking inventories, lighting audits, and water usage audits. The competencies in this course are aligned with the California High School Academic Content Standards and the California Career Technical Education Model Curriculum Standards.

Prerequisites:
Enrollment requires a reading level of 6.0 as measured by the CASAS GOALS test.

NOTE: For Perkins purposes this course has been designated as a **concentrator/capstone** course.

This course **cannot** be repeated once a student receives a Certificate of Completion.

Los Angeles Unified School District
Division of Adult and Career Education
Instructional and Couseling Services Unit
Adult Curriculum Office
www.wearedace.org

COURSE OUTLINE COMPETENCY-BASED COMPONENTS

A course outline reflects the essential intent and content of the course described. Acceptable course outlines have six components. (Education Code Section 52506). Course outlines for all apportionment classes, including those in jails, state hospitals, and convalescent hospitals, contain the six required elements:

(EC 52504; 5CCR 10508 [b]; Adult Education Handbook for California [1977], Section 100)

COURSE OUTLINE COMPONENTS	**LOCATION**
GOALS AND PURPOSES	Cover

The educational goals or purposes of every course are clearly stated and the class periods are devoted to instruction. The course should be broad enough in scope and should have sufficient educational worth to justify the expenditure of public funds.

The goals and purpose of a course are stated in the COURSE DESCRIPTION. Course descriptions state the major emphasis and content of a course, and are written to be understandable by a prospective student.

PERFORMANCE OBJECTIVES OR COMPETENCIES	pp. 7-13

Objectives should be delineated and described in terms of measurable results for the student and include the possible ways in which the objectives contribute to the student's acquisition of skills and competencies.

Performance Objectives are sequentially listed in the COMPETENCY-BASED COMPONENTS section of the course outline. Competency Areas are units of instruction based on related competencies. Competency Statements are competency area goals that together define the framework and purpose of a course. Competencies fall on a continuum between goals and performance objectives and denote the outcome of instruction.

Competency-based instruction tells a student before instruction what skills or knowledge they will demonstrate after instruction. Competency-based education provides instruction which enables each student to attain individual goals as measured against pre-stated standards.

Competency-based instruction provides immediate and continual repetition and In competency-based education the curriculum, instruction, and assessment share common characteristics based on clearly stated competencies. Curriculum, instruction and assessment in competency-based education are: explicit, known, agreed upon, integrated, performance oriented, and adaptive.

COURSE OUTLINE COMPETENCY-BASED COMPONENTS (continued)

COURSE OUTLINE COMPONENTS	LOCATION
INSTRUCTIONAL STRATEGIES	p. 15
Instructional techniques or methods could include laboratory techniques, lecture method, small-group discussion, grouping plans, and other strategies used in the classroom. Instructional strategies for this course are listed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructional strategies and activities for a course should be selected so that the overall teaching approach takes into account the instructional standards of a particular program, i.e., English as a Second Language, Programs for Adults with Disabilities.	
UNITS OF STUDY, WITH APPROXIMATE HOURS ALLOTTED FOR EACH UNIT	Cover
The approximate time devoted to each instructional unit within the course, as well as the total hours for the course, is indicated. The time in class is consistent with the needs of the student, and the length of the class should be that it ensures the student will learn at an optimum level. Units of study, with approximate hours allotted for each unit are listed in the COMPETENCY AREA STATEMENT(S) of the course outline. The total hours of the course, including work-based learning hours (community classroom and cooperative vocational education) is listed on the cover of every CBE course outline. Each Competency Area listed within a CBE outline is assigned hours of instruction per unit.	pp. 7-13
EVALUATION PROCEDURES	p. 15
The evaluation describes measurable evaluation criteria clearly within the reach of the student. The evaluation indicates anticipated improvement in performances as well as anticipated skills and competencies to be achieved. Evaluation procedures are detailed in the TEACHING STRATEGIES AND EVALUATION section of the course outline. Instructors monitor students' progress on a continuing basis, assessing students on attainment of objectives identified in the course outline through a variety of formal and informal tests (applied performance procedures, observations, and simulations), paper and pencil exams, and standardized tests.	
REPETITION POLICY THAT PREVENTS PERPETUATION OF STUDENT ENROLLMENT	Cover
After a student has completed all the objectives of the course, he or she should not be allowed to reenroll in the course. There is, therefore, a need for a statement about the conditions for possible repetition of a course to prevent perpetuation of students in a particular program for an indefinite period of time.	

ACKNOWLEDGMENTS

Thanks to PAUL PIDOUX and MARCELA BAKER for developing and editing this curriculum. Acknowledgment is also given to ERICA ROSARIO for designing the original artwork for the course covers.

ANA MARTINEZ
Specialist
Career Technical Education

ROSARIO GALVAN
Administrator
Division of Adult and Career Education

APPROVED:

JOE STARK
Executive Director
Division of Adult and Career Education

1.0 Academics
Analyze and apply appropriate academic standards required for successful industry sector pathway completion leading to postsecondary education and employment. Refer to the Energy, Environment, and Utilities academic alignment matrix for identification of standards.

2.0 Communications
Acquire, and accurately use Energy, Environment, and Utilities sector terminology and protocols at the career and college readiness level for communicating effectively in oral, written, and multimedia formats.

3.0 Career Planning and Management
Integrate multiple sources of career information from diverse formats to make informed career decisions, solve problems, and manage personal career plans.

4.0 Technology
Use existing and emerging technology to investigate, research, and produce products and services, including new information, as required in the Energy, Environment, and Utilities sector workplace environment.

5.0 Problem Solving and Critical Thinking
Conduct short, as well as more sustained, research to create alternative solutions to answer a question or solve a problem unique to the Energy, Environment, and Utilities sector using critical and creative thinking; logical reasoning, analysis, inquiry, and problem-solving techniques.

6.0 Health and Safety
Demonstrate health and safety procedures, regulations, and personal health practices and determine the meaning of symbols, key terms, and domain-specific words and phrases as related to the Energy, Environment, and Utilities sector workplace environment.

7.0 Responsibility and Flexibility
Initiate, and participate in, a range of collaborations demonstrating behaviors that reflect personal and professional responsibility, flexibility, and respect in the Energy, Environment, and Utilities sector workplace environment and community settings.

8.0 Ethics and Legal Responsibilities
Practice professional, ethical, and legal behavior, responding thoughtfully to diverse perspectives and resolving contradictions when possible, consistent with applicable laws, regulations, and organizational norms.

9.0 Leadership and Teamwork
Work with peers to promote divergent and creative perspectives, effective leadership, group dynamics, team and individual decision making, benefits of workforce diversity, and conflict resolution as practiced in the SkillsUSA career technical student organization.

10.0 Technical Knowledge and Skills
Apply essential technical knowledge and skills common to all pathways in the Energy, Environment, and Utilities sector.

11.0 Demonstration and Application
Demonstrate and apply the knowledge and skills contained in the Energy, Environment, and Utilities anchor standards, pathway standards, and performance indicators in classroom, laboratory, and workplace settings, and through the SkillsUSA career technical student organization.

B. Energy and Power Technology Pathway

The Energy and Power Technology pathway provides learning opportunities for students interested in preparing for careers in the energy and power industries.

Sample occupations associated with this pathway:

- Energy Efficiency Evaluation Specialist
- Energy Engineer
- Energy Generation/Power Distribution, Maintenance, Inspection, and Repair Technicians
- Energy/Building Retrofit Specialist
- Plant/Field Weatherization Installer

B1.0 Explore the basic conventional and emerging principles and concepts of the energy industry, including energy production, energy transmission, and alternative energy technologies.

B2.0 Identify various conventional electric power generation fuel sources and the cost and efficiency issues associated with each.

B3.0 Investigate emerging and alternative electric power generation technologies and fuel sources.

B4.0 Understand nonnuclear power generation plant operations (coal, oil, natural gas, solar, wind, geothermal power, hydroelectric, or biofuel).

B5.0 Understand and apply basic knowledge and skills necessary for nuclear power generation and nuclear power plant personnel.

B6.0 Research methods of energy procurement, transmission, distribution, and storage.

B7.0 Understand the interrelationships among components of systems.

COMPETENCY-BASED COMPONENTS for the Energy Auditing Course

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
A. ORIENTATION AND SAFETY Understand, apply, and evaluate classroom and workplace policies and procedures used in accordance with federal, state, and local safety and environmental regulations. (5 hours)	1. Describe the scope and purpose of the course. 2. Describe the overall course content as a part of the Linked Learning Initiative. 3. Describe classroom policies and procedures. 4. Describe the different occupations in the Energy and Utilities Industry Sector which have an impact on the role of energy auditing technicians. 5. Describe the opportunities available for promoting gender equity and the representation of non-traditional populations in the energy auditing field. 6. Describe the purpose of the California Occupational Safety and Health Administration (Cal/OSHA) and its laws governing energy auditing technicians. 7. Describe the impact of Environmental Protection Agency (EPA) legislation on the Energy and Utilities Industry Sector practices. 8. Describe and demonstrate the procedures for contacting proper authorities for the removal of hazardous materials based on the EPA standards. 9. Describe the National Electrical Code (NEC) and its role in safeguarding the work conditions of energy auditing technicians. 10. Describe and demonstrate the use of the Material Safety Data Sheet (MSDS) as it applies to the energy auditing field. 11. Describe the role of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™, American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), and National Association of Home Builders (NAHB) in increasing the use of green and sustainable technology in California. 12. Describe the City of Los Angeles Building and Safety Codes and their applications to the energy auditing field. 13. Describe the provisions of the California Title 24 Energy Efficiency Standards (a.k.a. 2008 California Green Building Standards Code) as they relate to the Energy and Utilities Industry Sector. 14. Describe classroom and workplace first aid and emergency procedures based on the American Red Cross (ARC) standards. 15. Pass the safety test with 100% accuracy.	**Career Ready Practice:** 1, 3, 4, 6, 7, 8, 9, 12 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4 Critical Thinking and Problem Solving: 5.1, 5.4 Health and Safety: 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 6.11 Responsibility and Flexibility: 7.7 Ethics and Legal Responsibilities: 8.1, 8.2, 8.4 Leadership and Teamwork: 9.6 **CTE Pathway:** B1.2

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
B. ENERGY Understand, apply, and evaluate the principles and sources of energy. (5 hours)	1. Define the following: a. energy i. potential energy ii. kinetic energy b. heat c. temperature d. energy unit e. British Thermal Unit (BTU) f. Therm g. Kilowatt Hour (kWH) h. weatherization i. R-value j. energy audit i. preliminary audit ii. general audit iii. investment-grade audit k. thermodynamics i. 1st law ii. 2nd law 2. Describe the following energy transfer methods: a. conduction b. convection c. radiation d. electrical power transmission e. mechanical work 3. Describe the following sources of energy: a. petroleum b. coal c. hardwoods d. softwoods e. natural gas f. propane g. uranium h. biomass i. hydropower j. geothermal k. wind l. solar	**Career Ready Practice:** 1, 3, 10, 11 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4 Technical Knowledge and Skills: 10.1 **CTE Pathway:** B1.1, B1.2, B1.8, B2.1, B2.2, B2.3, B2.4, B3.3, B3.4, B3.6, B3.7, B4.1, B4.6, B5.7, B7.2

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
C. DATA COLLECTION Understand, apply, and evaluate the principles and procedures used in data collection for energy auditing. (20 hours)	1. Define the following: a. owner interview b. site inspection c. data analysis d. usage tracking e. graph development f. cost benefit analysis 2. Describe the following steps in energy auditing data analysis: a. using historical performance information for preliminary energy audit results b. using existing data of energy consumption i. visual and sensory inspection for cause and effect ii. building diagnostic procedures by using accurate detection equipment c. implementing immediate low/no cost improvements d. documenting the scope of saving 3. Describe the following ways of energy usage tracking: a. energy metering b. power measurement c. energy data storage, tracking, and analysis 4. Describe the importance of creating graphs to show visible patterns and trends energy usage. 5. Describe how cost benefit analysis is achieved in implementing changes after an energy audit of a building or system. 6. Describe the ways of finding alternative sources of energy. 7. Describe the role of reports and recommendations in decision-making. 8. Visit a home or a building and perform the following: a. collection of historical performance information b. visual and sensory inspection c. tracking of energy usage/consumption 9. Analyze the data collected. 10. Write recommended changes based on the analysis.	**Career Ready Practice:** 1, 3, 5, 11, 12 **CTE Anchor:** Communications; 2.1, 2.2, 2.3, 2.4 Problem Solving and Critical Thinking: 5.1 Technical Knowledge and Skills: 10.1, 10.6 **CTE Pathway:** B1.1, B1.2, B1.7, B1.8
D. RESOURCE ACCOUNTING Understand, apply, and evaluate the principles and procedures used in resource accounting.	1. Define the following: a. resource accounting b. energy efficiency c. efficiency ratings d. energy conversion e. energy conversion charts 2. Describe how resource accounting prevents energy depletion. 3. Describe the efficiency ratings of the various resources available. 4. Describe the importance of energy conversion. 5. Convert the following energy units: a. BTU to Therms b. kWH to BTU c. Therm to KWH 6. Describe the role of energy conversion charts in resource accounting.	**Career Ready Practice:** 1, 3, 5, 10, 11, 12 **CTE Anchor:** Communication: 2.1, 2.2, 2.3, 2.4 Career Planning and Management: 3.4 Technology: 4.5 Problem Solving and Critical Thinking: 5.1, 5.2

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(15 hours)	7. Describe the following factors that influence energy usage: a. age of building b. construction of building c. purpose of the building d. energy forms in the building e. number of residents or inhabitants of building f. life or work style of building inhabitants or residents 8. Visit a home or a building and perform the following: a. determine the age of the building b. determine the construction of the building c. determine the purpose of the building d. determine the energy forms in the building e. determine the number of residents or inhabitants of the building f. determine the life or work style of building inhabitants or residents g. determine if there is a resource accounting system h. recommend energy conversion methods **i.** create a conversion chart	Health and Safety: 6.2 Ethics and Legal Responsibilities: 8.1, 8.2 Technical Knowledge and Skills: 10.1, 10.2 **CTE Pathway:** B1.1, B1.2, B1.3, B7.3, B7.4
E. ESTABLISHING BASELINES Understand, apply, and evaluate the principles and procedures used in establishing baselines. (5 hours)	1. Define the following: a. baseline b. seasonal load c. base load 2. Describe the importance of understanding one's residential or corporate energy bills. 3. Differentiate seasonal loads vs. base loads. 4. Describe the steps in developing resource usage charts. 5. Visit a home or building and perform the following: a. determine the base loads of the building b. determine the seasonal loads of the building c. create a resource usage chart d. recommend modifications in resource usage e. create a modified and energy-efficient resource usage chart	**Career Ready Practice:** 1, 3, 5, 10, 12 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4, 2.5 Responsibility and Flexibility: 7.5 Ethics and Legal Responsibility: 8.1 Technical Knowledge and Skills: 10.1, 10.2, 10.6 **CTE Pathway:** B1.1, B1.2, B1.3, B7.3, B7.4
F. TAKING INVENTORIES Understand, apply, and evaluate the principles and procedures used in taking inventories.	1. Define energized systems. 2. Identify the components of the following energized systems: a. cooling systems b. heating systems c. lighting d. cooking e. waste handling	**Career Ready Practice:** 1, 3, 5, 10 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4, 2.5

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(15 hours)	f. shop equipment g. office equipment 3. Define the following: a. non-energized systems b. infrared (thermogenic) imaging c. human systems 4. Describe how infrared imaging reveals the efficiency of the following non-energized systems: a. walls b. windows c. roofs d. ceilings e. doors f. flooring g. landscaping 5. Describe the importance of taking energy inventories of the following human systems in a building: a. staff/residents b. customers/vendors 6. Describe strategies that would reduce the amount of energy that human systems consume in: a. your own home b. your school c. a multi-unit apartment complex 7. Describe the advantages and disadvantages of using commercial software for energy inventory and analysis, i.e., Targeted Retrofit Energy Analysis Tool (TREAT). 8. Describe and demonstrate the procedures for manually calculating monthly and annual energy consumption for the following: a. a one-story residence b. a multi-unit apartment complex	Responsibility and Flexibility: 7.5 Ethics and Legal Responsibility: 8.1 Technical Knowledge and Skills: 10.1, 10.2, 10.6 **CTE Pathway:** B1.1, B1.2, B1.3
G. LIGHTING AUDITS Understand, apply, and evaluate the principles and procedures used in lighting audits.	1. Define the following: a. lamp i. incandescent lamp ii. fluorescent lamp iii. halogen lamp iv. light-emitting diode (LED) b. light fixture c. lighting system d. lamp-ballast system i. magnetic ballast ii. electronic ballast e. unit of light i. lumens ii. foot-candle levels 2. Identify the lighting system in a building or building being audited.	**Career Ready Practice:** 1, 3, 4, 10 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4, 2.5 Problem Solving and Critical Thinking: 5.1, 5.2, 5.3, 5.4 Responsibility and Flexibility: 7.5 Ethics and Legal Responsibilities: 8.1

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(10 hours)	3. Identify the foot-candle levels in a building or building being audited based on: a. the task b. the area where the task is being done 4. Describe the importance of understanding the difference in ballast types. 5. Describe the importance of understanding lamp types based on efficacy (lumens/watts) and average life in hours. 6. Describe the importance of understanding maintenance costs associated with the selection of lighting equipment. 7. Describe the following steps used in taking lighting inventory: a. identify lighting base load items b. identify type of tasks performed c. identify location of tasks 8. Visit a model home or a building, perform a lighting audit, and submit a written analysis and recommendations based on the findings.	**CTE Pathway:** B6.3, B7.3, B7.4
H. WATER-USAGE AUDITS Understand, apply, and evaluate the principles and procedures used in auditing water usage.	1. Define the following: a. flow rate/Gallons Per Minute (GPM) b. boiler c. insulated hot water pipes d. calorie e. Fahrenheit (F) f. Centigrade (C) g. cubic foot of water 2. Identify the following: a. reason for installing a shower head with 2.5 GPM or less b. GPM for a typical shower that you take c. efficiency of your shower as compared to the 2.5 GPM flow 3. Identify the typical flow rates of the following systems: a. laundry systems b. cooking systems c. sanitary systems 4. Describe the water usage effect of installing energy-efficient appliances in the following:: a. laundry systems b. cooking systems c. sanitary systems 5. Identify the heating sources for a typical building. 6. Identify the items in the following boiler checklist requirements: a. daily requirements b. weekly requirements c. monthly requirements 7. Describe the importance of pipe insulation in using water efficiently.	**Career Ready Practice:** 1, 3, 11 **CTE Anchor:** 2.1, 2.2, 2.3, 2.4, 2.5 Problem Solving and Critical Thinking: 5.1, 5.2, 5.3, 5.4 Responsibility and Flexibility: 7.5 Ethics and Legal Responsibilities: 8.1 Technical Knowledge and Skills: 10.1 **CTE Pathway:** B1.2, B1.7, B1.8

COMPETENCY AREAS AND STATEMENTS	MINIMAL COMPETENCIES	STANDARDS
(10 hours)	8. Calculate the number of calories it takes to heat: a. a liter of water to 140° F in your home b. a gallon of water to 140° F in your home c. a cubic foot of water to 140° F in your home 9. Calculate the number of kWHs it takes to heat a cubic foot of water to 140° F in your home. 10. Calculate the number of Therms it takes to heat a cubic foot of water to 140° F in your home. 11. Compare the cost of gas and electricity to heat a cubic foot of water. 12. Visit a model home or a building, perform a water usage audit, and submit a written analysis and recommendations based on the findings.	
I. EMPLOYABILITY SKILLS Understand, apply, and evaluate the processes involved in seeking, gaining, and maintaining employment. (5 hours)	1. Describe employer requirements for the following: a. punctuality b. attendance c. attitude toward work d. quality of work e. teamwork f. timeliness g. communication skills h. computer skills and software applications 2. Identify potential employers through traditional and internet sources. 3. Describe the role of electronic social networking in job search. 4. Design sample résumés and cover letters. 5. Describe the importance of filling out a job application legibly, with accurate and complete information. 6. Complete sample job application forms correctly. 7. Describe the importance of enthusiasm on a job. 8. Describe the importance of appropriate appearance on a job. 9. Describe the importance of the continuous upgrading of job skills. 10. Describe customer service as a method of building permanent relationships between the organization and the customer. 11. Describe and demonstrate appropriate interviewing techniques. 12. Identify the informational materials and resources needed to be successful in an interview. 13. Design sample follow-up letters. 14. Describe and demonstrate appropriate follow-up procedures.	**Career Ready Practice:** 1, 2, 3, 6, 7, 8 **CTE Anchor:** Communications: 2.1, 2.2, 2.3, 2.4, 2.5 Career Planning and Management: 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.9 Technology: 4.1 Problem Solving and Critical Thinking: 5.1 Responsibility and Flexibility: 7.2, 7.3, 7.4, 7.5, 7.7 Ethics and Legal Responsibilities: 8.3, 8.5 Leadership and Teamwork: 9.3, 9.6 Technical Knowledge and Skills: 10.1 Demonstration and Application: 11.1, 11.2, 11.5 **CTE Pathway:** B1.5, B1.7, B6.3

SUGGESTED INSTRUCTIONAL MATERIALS and OTHER RESOURCES

TEXTS AND SUPPLEMENTAL BOOKS

Beggs, Clive. Energy: Management, Supply and Conservation, 2nd Edition. Elsevier Science, 2009.

Capehart, Barney L. Wayne C. Turner, and William J. Kennedy. Guide to Energy Management, 7th Edition. Fairmont Press, 2011.

Doty, Steve. Commercial Energy Auditing Reference Handbook. Taylor & Francis, Inc., 2008.

Krarti, Moncef. Energy Audit of Building Systems. CRC Press, 2000.

Krigger, John and Chris Dorsi. Energy Auditor. Prentice Hall, 2009.

Vaillencourt, Richard R. Simple Solutions to Energy Calculations, 4th Edition. Taylor & Francis, Inc., 2007.

Vandone, Agnes F. and John McBrewster. Energy Audit. Alphascript Publishing, 2009.

RESOURCES

Employer Advisory Board members

CTE Model Curriculum Standards
http://www.cde.ca.gov/ci/ct/sf/documents/energyutilities.pdf

www.energytracking.com/

www.searsblueclimatecrew.com/audit-details

www.americangreenjobs.net

www.renewableenergyjobs.com/

careers.pennenergyjobs.com

www.cleantechrecruits.com

COMPETENCY CHECKLIST

TEACHING STRATEGIES and EVALUATION

METHODS AND PROCEDURES

A. Lectures and discussions

B. Multimedia presentations

C. Demonstrations and participation

D. Individualized instruction

E. Peer teaching

F. Role-playing

G. Guest speakers

H. Field trips and field study experiences

I. Projects

EVALUATION

SECTION A –Orientation and Safety– Pass the safety test with 100% accuracy.

SECTION B – Energy – Pass all assignments and exams on energy with a minimum score of 80% or higher.

SECTION C – Data Collection – Pass all assignments and exams on data collection with a minimum score of 80% or higher.

SECTION D – Resource Accounting – Pass all assignments and exams on resource accounting with a minimum score of 80% or higher.

SECTION E – Establishing Baselines – Pass all assignments and exams on establishing baselines with a minimum score of 80% or higher.

SECTION F – Taking Inventories – Pass all assignments and exams on taking inventories with a minimum score of 80% or higher.

SECTION G – Lighting Audits – Pass all assignments and exams on lighting audits with a minimum score of 80% or higher.

SECTION H – Water Usage Audits – Pass all assignments and exams on water usage audits with a minimum score of 80% or higher.

SECTION I – Employability Skills – Pass all assignments and exams on employability skills with a minimum score of 80% or higher.

Statement for Civil Rights

All educational and vocational opportunities are offered without regard to race, color, national origin, gender, or physical disability.