



21250 Stevens Creek Blvd.  
Cupertino, CA 95014  
408-864-5678  
www.deanza.edu

Academic Year  
**2015 - 2016**

Environmental Studies  
**Energy Management and Building Science**

Biological, Health, Environmental  
Sciences Division/ES Dept.  
Kirsch Center Room 218  
408-864-8628, 8773

Counseling Center  
Student and Community  
Services Bldg. 2nd Fl.  
408-864-5400

Please visit the Counseling Center to apply for certificates and degrees, and for academic planning assistance.

**Certificate of Achievement Level Requirements**

A minimum "C" grade in each major course.

Note: A maximum of six (6) quarter units may be transferred from other academic institutions.

*Major courses for certificates and degrees must be completed with a letter grade unless a particular course is only offered on a pass/no-pass basis.*

**Energy Management and Building Science**

**Certificate of Achievement**

This Certificate of Achievement trains students in 21st century energy management/climate policy principles, practices, and technology; environmental science principles; laws of thermodynamics; and effective design and management of energy systems and a sustainable society based on energy efficiency principles. The program will also prepare students in Level 1 introductory energy management practices, protocols, monitoring and evaluation of energy equipment and systems.

*Student Learning Outcomes - upon completion, students will be able to:*

- investigate and communicate the relationships between energy management/climate policy and ecological principles and evaluate the role of energy management in fostering a sustainable society.
- demonstrate an understanding of energy management principles, laws of thermodynamics, effective design of energy systems and a sustainable society utilizing energy management systems.

1. Meet the requirements for this certificate level.

2. Complete the following.

E S 1	Introduction to Environmental Studies	4
E S 58	Introduction to Green Building	1
E S 64	AB 32 (CA Global Warming Solutions Act of 2006)	1
E S 65	Environmental Stewardship	1
E S 66	Environmental Leadership	1
E S 67	Environmental Team-Building	1
E S 69	Energy Reliability and Your Organization	1
E S 70	Introduction to Energy Management Technology	1
E S 70LX	Energy Management Technology and Principles of Building Performance Laboratory	1
E S 71	The Building Envelope	1
E S 71LX	The Building Envelope and Climate Responsive Building Design and Construction Laboratory	1
E S 72	Heating, Ventilating and Air Conditioning (HVAC) Systems	1
E S 73	Electric Motors and Drives	1
E S 74	Lighting Distribution Systems	1
E S 75	Electric Power Systems	1
E S 76	Energy Star Products	1
E S 76A	Solar Thermal Systems	1
E S 78	Energy Management Systems and Controls	1
E S 79	Renewable and Alternative Energy Systems	1
ESCI 61	Introduction to Photovoltaic (PV) Technology	3
<b>Total Units Required.....</b>		<b>25</b>