SUSTAINABLE ENERGY STUDIES

Associate in Science
Career /Technical (Major Code: 02472)

Introduces the student to the study of the growth of the human population and its effects on energy and climate demands with an emphasis on landscaping and the built environment. Studies the relationship between human biology and the environment as applied to building design. Emphasizes sustainable building design, passive energy strategies, and the application of appropriate heating, cooling, and ventilation systems. A hands-on study of energy auditing methods of existing homes as they are now constructed, analysis of residential design and strategies for energy efficiency. Prepares the student to take the California Home Energy Rater System (H.E.R.S.) level 1 certification exam.

Program Student Learning Outcomes

- Student will demonstrate how a home can be energy efficient with the natural and building environment.
- Student will convert text examples into hands on experience providing written documentation to substantiate findings.
- Student will investigate and analyze a given problem and then provide a solution that fits a given set of criteria.
- Student will demonstrate knowledge of natural and anthropogenic environmental issues that affect global warming and world economy, and analyze the issues as these apply to the local and economic environment.
- Student will perform site analysis/reconnaissance, home energy audit and energy code compliance to evaluate the energy efficiency of a given building, assessing the outcome of the study in comparison to given set data/criteria employing the use of a written and graphic report.

Code	Title	Units
Program Requirements		
SES/LNT 101	INTRODUCTION TO SUSTAINABLE ENERGY STUDIES	3
SES/CI 105	CALIFORNIA GREEN CODE AND SUSTAINABLE TECHNOLOGIES	3
SES 110	INTRODUCTION TO BUILDING SCIENCE	4
SES 120	THE ENERGY EFFICIENT BUILDING	3
SES/ARCH 201	BEGINNING BUILDING INFORMATION MODELING	3
SES 205	BUILDING ENERGY ANALYSIS USING BIM	3
Total Units		**19**

To earn an associate degree, additional general education and graduation requirements (http://catalog.swccd.edu/certificates-certifications-degrees-csuuc-requirements/) must be completed.