



Certificate RENEWABLE ENERGY

This program will provide you with the information and practical experience necessary to design and build or install various types of renewable energy systems. It emphasizes conservation and efficiency as the first step in any renewable energy endeavor through a study of historical, modern, and emerging technologies and materials. As a graduate, you will be prepared for employment with construction firms, renewable energy firms, alternative technology firms, design and planning firms, or self-employment as a specialized subcontractor. You will also have the skills needed to design and build your own off-the-grid homes and vehicles.

GENERAL EDUCATION (6–7 CRS)

Communications (3)

ENG 108N Basic English I (3) (or higher-level English)

Math/Computers/Lab Sciences (3–4)

MATH 102N Basic Algebra (4) or MATH 103N (4) (or higher-level math)

PROGRAM REQUIREMENTS (26 CRS)

General: Complete 9 crs from the following:

- ES 112 Introduction to Environmental Science (3)
- ES 112L Introduction to Environmental Science Lab (1)
- ES 299 Practicum in Environmental Science (1-4)
- RE 103 Renewable Energy Introduction and Overview (3)
- RE 104 Architecture 2030 and the 2010 Imperative (3)

Solar Heating: Complete 5 crs from the following:

- ADOB 107 Passive Solar Heating (2)
- RE 108 Active Solar Heating (3)
- RE 108L Solar Energy Lab (2)
- PLB 110 Intro to Solar Heating Plumbing (1)
- PLB 110L Intro to Solar Heating Plumbing Lab (2)

Renewable Electric and Electronics: Complete 8 crs from the following:

- ELEC 100 Introduction to Solar Electricity (1)
- ELEC 110L Introduction to Solar Electricity Lab (2)
- ELEC 140 Electrical Theory I (3)
- ELEC 190 Solar and Wind Systems in the Electric Code (2)
- RE 160 Renewable Electric Power Systems (3)
- RE 207 Wind Electric System Design and Installation (4)
- RE 208 Photovoltaic System Design and Installation (4)

Renewable Vehicle Power: Complete 2 crs from the following:

- RE 140 Electric Vehicle Conversion: Nuts and Bolts (2)
- RE/ATEC 144 Bio-Diesel Fuel Production and Engine Requirements (3)
- RE/ATEC 146 Bio-Hybrid Fuel Production and Engine Requirements (3)

Geothermal, Biomass, and Emerging Technologies: Complete 2 crs from the following

- RE 127 Geothermal Systems for Heat and Power (4)

- RE 128 Biomass Systems for Heat, Power, and Cogeneration (4)
- RE 129 Trends and Emerging Energy Sources (2)
- RE 130 Hydroelectric Power Systems (2)

TOTAL CREDITS 32-33