



Associate of Applied Science, Certificate
RENEWABLE ENERGY

This program will provide you with the skills necessary to enter environmental fields—the renewable energy, alternative technology, and construction industries – at higher than entry level. You will be capable of entering at supervisory or management internship levels or of establishing a small related business.

GENERAL EDUCATION (29 crs)

COMPLETED

Planned Timeline
(By Semester)

Communications (9 crs)

ENG 111 English Composition I (3)

Pre-requisites: ENG 109 or adequate score on the Course Placement Evaluation

ENG 116 Technical Writing (3)

Pre-requisite: ENG 111

SPCH 130 Public Speaking I (3)

Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation

Math/Computers/Laboratory Sciences (14 crs)

MATH 145 Introduction to Probability and Statistics (3)

Pre-requisite: MATH 130

MATH 150 College Algebra (3)

Pre-requisite: MATH 130

CHEM 121/L General Chemistry I with lab (4)

Pre-requisite: MATH 130 or high school chemistry within 2 years

PHYS 121/L Applied Physics I with lab (4)

Pre-requisite: MATH 130

Humanities and Fine Arts (3 crs)

Elective (3) _____

Choose from the following discipline areas: Art (theory only), History, Humanities, Literature, Music (theory only) Philosophy, or Theatre (theory only)

Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation

Social/Behavioral Science (3 crs)

Pre-requisite: ENG 109 or adequate score on the Course Placement Evaluation

GEOG 111 World Geography (3)

Or

Elective (3) _____

Choose from the following discipline areas: Anthropology, Economics, Geography, Political Science Psychology, or Sociology

HEALTH, PHYSICAL EDUCATION & RECREATION (2 CR)

Elective (2) _____

PROGRAM REQUIREMENTS (36 crs)

Completion of Renewable Energy Certificate Program (26)

Electives from: RE, ELEC, ES, ADOB, CONS, CARP, DRFT (10)

TOTAL CREDIT HOURS 67



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 capable of being employed with construction firms, renewable energy firms, alternative technology firms, design and planning firms, or of being self-employed as a specialized subcontractor. You will be capable of designing and building your own off-the-grid homes and vehicles.

GENERAL EDUCATION (6-7 crs)

Communications (3 crs)

ENG 108 Basic English I (3) or a higher level English course
Pre-requisite: ENG 106 or adequate score on the Course Placement Evaluation

Math/Computers/Laboratory Sciences (3-4 crs)

MATH 102 Basic Algebra (4) or a higher level math course
Pre-requisite: MATH 100 or adequate score on the Course Placement Evaluation

PROGRAM REQUIREMENTS (26 crs)

General: Complete 9 crs from the following:

ES 112/L Introduction to Environmental Science and lab(3)

ES 299 Practicum in Environmental Science (1-4)

Pre-requisite: permission of advisor

RE 103 Renewable Energy Introduction and Overview (3)

Pre-requisites: ENG 108, MATH 100

RE 104 Architecture 2030 and the 2010 Imperative (3)

Pre-requisites: ENG 108, MATH 100

Solar Heating: Complete 5 crs from the following:

ADOB 107 Passive Solar Heating (2)

RE 108 Active Solar Heating (3)

Recommended Co-requisite: RE 108L

RE 108L Solar Energy Lab (2)

Recommended Co-requisite: RE 108 or ADOB 107

PLB 110/L Intro to Solar Heating Plumbing/L (3)

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

ELEC 100/L Introduction to Solar Electricity and Lab (1)

ELEC 140 Electrical Theory I (3)

ELEC 190 Solar and Wind Systems in the Electric Code (2)

Recommended Co-requisite: RE 207 or 208

RE 160 Renewable Electric Power Systems (3)

Pre-requisite: MATH 130

RE 207 Wind Electric System Design and Installation (4)

Pre-requisites: ENG 108, MATH 100, RE 103, and ECET 160; Recommended Co-requisite: ELEC 190

RE 208 Photovoltaic System Design and Installation (4)

Pre-requisites: ENG 108, MATH 100, RE 103, and ECET 160; Recommended Co-requisite: ELEC 190

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)

Pre-requisites: ENG 108, MATH 100, RE 103

RE/ATEC 146 Bio-Hybrid Fuel Production and Engine Requirements (3)

Pre-requisites: ENG 108, MATH 100, RE 103

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

RE 127 Geothermal Systems for Heat and Power (4)

Pre-requisite: RE 103

RE 128 Biomass Systems for Heat, Power, and Cogeneration (4)

Pre-requisite: RE 103

RE 129 Trends and Emerging Energy Sources (2)

Pre-requisite: RE 103

	COMPLETED	Planned Timeline (By Semester)
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Educational Planning Form (By Semester)

Fall Semester	Spring Semester	Summer
Total Units	Total Units	Total Units
Fall Semester	Spring Semester	Summer
Total Units	Total Units	Total Units
Fall Semester	Spring Semester	Summer
Total Units	Total Units	Total Units