

**RENEWABLE ENERGY**  
**Photovoltaic System Design and Installation**  
**Associate of Applied Science Degree and Certificate**  
**Catalog 2010-2011**

SCHOOL OF ENERGY • 800 South Hutton • Farmington, NM 87401 • 505.327.5705

The Photovoltaic System Design and Installation degree is appropriate for students who are looking for a degree and for those wanting to pursue further education. Students will gain the knowledge and skills necessary to design and safely install electrical energy systems based on current photovoltaic and power conditioning equipment. Employment opportunities exist in small renewable energy businesses, energy companies, equipment supply companies, oil and gas field service companies, utilities, and in international agencies assisting the development of Third World countries.

To earn the Associate of Applied Science degree, students must complete the course requirement for the one-year certificate in addition to general education courses. Students may enroll in general education courses prior to admission to the program, but **taking the general education courses that apply to the Renewable Energy curriculum does not guarantee acceptance into the program.** Renewable Energy is a selective program. Enrollment in RENG courses is limited to those who have been accepted into the program. Specific requirements must be met in order to enter the Renewable Energy Program. Contact the School of Energy or the program coordinator for further information at 327-5705. For the last program changes and selection process that may supersede the printed catalog, see the program's web page at <http://www.sanjuancollege.edu/reng>. If you do not have internet access contact the program coordinator or the School of Energy. This program requires students to have their own tools. Contact the program coordinator to obtain a list of the tools.

**PROGRAM SELECTION REQUIREMENT**

To be eligible for the Renewable Energy Program selection process, the student must have:

1. Achieve a minimum high school or college cumulative GPA of 2.50 or comparable GED scores. The GPA requirement must be fulfilled before being admitted into the program. (College GPA is based minimum of 12 non-remedial credits, those numbered 110 or higher.)
2. Met the admission requirements as found at the program's web page.

Note: A student must earn a grade of "C" or higher in all courses to obtain a certificate or degree.

Certificate Program

	<b>Credit Hours</b>	<b>Grade</b>
<b>Prerequisites before enrolling in the one year certificate program</b>		
____ COSC 116 Spreadsheets	3	_____
____ MATH 115 Intermediate Algebra and Applications	4	_____
	Total 7	
<b>Summer Session</b>		
____ INST 140 Applied Basic DC Circuits	3	_____
____ PHYS 111 Introduction to Physics	4	_____
	Total 7	
<b>1<sup>st</sup> Semester</b>		
____ INST 144 National Electrical Code	3	_____

(Continued on the next page)

___	INST	145	Applied Basic AC Circuits	3	___
___	INST	175	Renewable Energy Instrumentation	3	___
___	RENG	242	Photovoltaic Installation and the NEC I	3	___
___	RENG	242L	Photovoltaic Installation and the NEC I Lab	2	___
___	RENG	250	Passive Solar Design and Analysis	<u>3</u>	___
				Total	17

### 2nd Semester

___	INST	215	Renewable Energy AC and DC Machines	3	___
___	RENG	220	Photovoltaic Theory and System Design	4	___
___	RENG	243L	Photovoltaic Installation and NEC II Lab	2	___
___	RENG	243	Photovoltaic Installation and NEC II	3	___
___	RENG	260	Solar Thermal Design and Application	3	___
___	___	___	Renewable Energy Elective*	<u>3-4</u>	___
				Total	18-19

Total Credits 42-43

\* Choose from: BIOL 230 – Environmental Conservation (4), RENG 270 – Sustainable Development (3), OR RENG 299 – Special Topics (1-4).

## ADDITIONAL COURSES LEADING TOWARDS AN ASSOCIATE OF APPLIED SCIENCE DEGREE

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Students must complete the course requirements for the One-Year Certificate. In addition the following courses listed below must be taken.

___	CHEM	110	Introductory Chemistry	4	___
___	COMM	110	Public Speaking <b>OR</b>		
___	COMM	111	Interpersonal Communication	3	___
___	ENGL	118	Technical Composition	3	___
___	ENGL	218	Advanced Technical Composition	3	___
___	___	___	Humanities/Social Science Elective**	<u>3</u>	___
				Total	16

Total credit hours required for this degree is 65-66

\*\* See page 37 for Humanities and Social Science Elective, 2010-2011 San Juan College catalog.