

# Crestone Solar School

551 Panorama Way, Crestone, CO 81131  
[www.crestonesolarschool.com](http://www.crestonesolarschool.com)

(719) 256-4656

**2012**

## Solar Heating and Natural Building Workshops

...a good foundation from which to grow...

A residential 4-day Certificate course. Your choice of dates.

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Take advantage of our Early Registration Discount.

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### Prices, Enrollment and Cancellation Policy

We will create a Solar Village environment for our learning experience.  
Prices include all meals and camping facilities.

Class size is limited and early registration is encouraged to reserve your place.  
Please see Registration Form on page 2.

The full workshop fee is due one month in advance to qualify for the Early  
Registration discount.

May 24 - 27 workshop:

\$750 - Early registration (*received before April 25<sup>th</sup>*)

\$800 - Late registration (*received after April 24<sup>th</sup>*)

June 14 - 17 workshop:

\$750 - Early registration (*received before May 15<sup>th</sup>*)

\$800 - Late registration (*received after May 14<sup>th</sup>*)

July 26 - 29 workshop:

\$750 - Early registration (*received before June 27<sup>th</sup>*)

\$800 - Late registration (*received after June 26<sup>th</sup>*)

August 2 - 5 workshop:

\$750 - Early registration (*received before July 3<sup>rd</sup>*)

\$800 - Late registration (*received after July 2<sup>nd</sup>*)

August 23 - 26 workshop:

\$750 - Early registration (*received before July 24<sup>th</sup>*)

\$800 - Late registration (*received after July 23<sup>rd</sup>*)

### Cancellation Policy

If you cancel before one month in advance, 50% of your workshop fee is non-refundable. If you cancel within 30 days of the start of the workshop, your full workshop fee is non-refundable. A written cancellation request is required.

We reserve the right to cancel any workshop due to insufficient enrollment or for any other reason. If that occurs, you will receive a full refund of your paid workshop fee.

Note: Please make Airline Reservations after your scheduled workshop is confirmed.

--Please print out page 2 and 3, fill in the info, and send these two pages in with your payment via postal mail.

# Crestone Solar School

## Solar Heating and Natural Building Workshops Registration Form 2011

May 24-27  June 17-14  July 26-29  August 2-5  August 23-26  
(Check Workshop you are attending.)

Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Emergency Contact Number: \_\_\_\_\_

Email: \_\_\_\_\_

Do you have special dietary/medical needs? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

What is your background in Solar Energy and Alternative Building?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What are your goals in attending this workshop?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Your course fee includes meals and camping accommodation.

Do you require other accommodations? \_\_\_\_\_

How did you hear about this workshop? \_\_\_\_\_

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I have read and understood CSS's Cancellation Policy.

**Signed:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Amount you are including with your registration:** \_\_\_\_\_

**Make your check payable to Paul Shippee. Credit cards not accepted.**  
Please send your **Registration Form** (pages 2 & 3) along with payment to:

Crestone Solar School  
P.O. Box 73  
Crestone, CO 81131

## Orientation

This page includes many orientation instructions and suggestions. **Please read it through carefully and entirely.** It contains Curriculum Information, Enrollment & Cancellation Policies, Advanced Preparation Suggestions, What To Bring list, and Arrival & Departure Suggestions.

**Curriculum:** Crestone Solar School workshops are presented in two parts, balanced between essential design knowledge and learning-by-doing. These are enhanced by visual aids and tours. Workshop fee includes course materials including a textbook with blank pages for your notes. The workshops go in-depth as much as four days time allows.

**Enrollment & Cancellation Policy:** Workshops are open to all on a first-come basis. Class size is limited and early registration is encouraged to reserve your place. The full workshop fee is due one month in advance. If you cancel up to 30 days prior to the workshop 50% of your tuition is non-refundable. If you cancel within 30 days of the workshop your full tuition is non-refundable.

We reserve the right to cancel any workshop due to insufficient enrollment or for any other reason. If that occurs, you will receive a full refund of your paid workshop fee.

**Note:** Please make **Airline Reservations after** your scheduled workshop is confirmed.

### **Advanced Preparation Suggestions:**

1. Please review your high school math about fractions, and become familiar with how they operate. We will work a lot with the principle of fractions as we learn and practice the units of energy. Using these basic building blocks is where some participants have gotten slowed down a bit in previous workshops.

Be prepared!

2. It will be helpful if you read through all or at least some of Paul's articles about solar applications found at <http://crestonesolarschool.com> . You will find them under “Solar Energy Articles” found at the top of each web page.

# Curriculum

The curriculum will go in-depth as much as 4 days allow.

## 1. Essential Design Knowledge:

- Heat Transfer, Building Load Estimation Methods, Thermal Storage, Sun Angles, Solar Radiation Availability, Climate.
- Energy Conservation techniques
- Passive and active solar heating for residences
- Solar domestic hot water
- Solar radiant floor Design
- Solar greenhouse
- Straw bale construction details
- Earth construction techniques
- Introduction to Photovoltaics (PV)
- Solar Economics including Tax Credits & Rebates
- Adobe floor construction techniques
- Earthen plasters and “alis” coatings
- Rammed Earth for walls

## 2. Hands-on Projects will touch upon:

- Learning how to build a flat plate solar collector
- Learning how to build a thermosiphon solar water heater
- Solar temperature measurement
- Solar performance evaluation
- Solar system components (piping, pumps, controls)
- Adobe clay ingredients, recipes and mixtures
- Adobe floor model construction
- Straw bale construction methods
- Earthen plasters for straw bale walls
- Alternative Energy house tours
- Design review for selected participants plans

## What To Bring:

Since onsite outdoor camping accommodations (bathroom and shower available) and all meals are provided, this list of suggestions addresses those situations.

- ! Waterproof tent, ground cloth and sleeping bag
- ! Sleeping pad and pillow
- ! Personal water bottle
- ! Cushion to sit on
- ! Flashlight (no candles)
- ! Umbrella and rain jacket
- ! Insect repellent/bug spray
- ! Sunscreen for high altitude
- ! Toilet articles and towel
- ! Calculator
- ! Notebook, pens and sticky notes
- ! Work clothes and sun hat
- ! Sunglasses for 8000 ft altitude
- ! Hiking boots or equivalent
- ! Cool evenings jacket
- ! Whistle
  
- ! Bowl, plate, cup and eating utensils and cloth napkins
- ! Please do not bring dogs or other pets, alcohol, drugs or firearms

## Arrival and Departure Suggestions:

Some flexibility is built in to accommodate your travel situation. All 4-day workshops begin on Thursday morning at 9 am and ends on Sunday evening after dinner. Please plan to arrive on Wednesday afternoon/evening to get yourself set up for camping. An evening meal will be provided on Wednesday. Or, depending on your travel situation, you may wish to arrive early on Thursday morning. Similarly, to suit your schedule, departures can occur on Sunday evening or on Monday morning when a breakfast meal will be provided.

### **AIR TRAVEL:**

Please make Airline Reservations **after** your scheduled workshop is confirmed.

Need a ride from the airport in Alamosa?

WindHorse Transportation & Tours 719-256-4091  
<http://windhorse.crestonecolorado.com/>

Please make arrangements in advance.