Course Description
This two-day program will be held in Blacksburg, VA (The Courtyard by Marriott). This intensive workshop introduces all the principles of drying hardwood and softwood lumber in a solar kiln. The course also contains information on the design and operation of solar kilns. Emphasis will be placed on the solar kiln design at Virginia Tech (www.woodscience.vt.edu/about/extension/vtsolar_kiln/). Our solar kiln is onsite and will be used in the course. Whether you are considering building a solar kiln or are currently operating one, this short course will provide you information that will improve your lumber drying skills. There will be a tour of the solar kiln, located at the Brooks Center.

Course Topics
Understanding the Drying Process
• How water moves in wood
• Aspects of wood that affect drying time and quality
• Drying stresses in wood
• Understanding how water and wood interact
• How log quality affects drying quality
• How sawing patterns affect drying
Air-drying Lumber (Prior to solar drying)
• Proper stacking methods
• Setting up air-drying capacity
• Estimating air-drying times
• Avoiding air-drying defects
Monitoring the Drying Process
• Moisture sections and kiln samples
• Measuring temperature and relative humidity
• Moisture meters
Solar Kiln Designs
• Passive solar
• Active solar
• Auxiliary heat
• Basic requirements of a solar kiln
• Variations on the basic design
• Solar powered fans
Operation of Solar Kilns
• Reducing stress
• Controlling kiln conditions
• Developing a schedule
• Handling extreme weather conditions
• Auxiliary heat
• Setting pitch and killing insects
Is solar drying Right for me?
• Discussion of solar kiln advantages and limitations
• Discussion of alternative kiln types
• Steam kilns
• Direct fired dry kilns
• Dehumidification kilns
Avoiding Defects in Lumber Drying
• Checks
• Honeycomb
• Stain
• Warp
• Collapse
Handling and Storing Dry Lumber
• Avoiding moisture uptake during storage
Course Registration
The fee for this course is $125 and includes lunches, refreshments, breaks and instructional materials. To register, return the attached form and payment by April 10, 2008. After this date, confirm registrations with the Conference Registrar at (540) 231-9812 to verify space availability.

For credit card payments, you may also register at: www.cpe.vt.edu/drysolar/

Note: Payment of registration fees is required prior to program attendance. Registration will be processed when payment is received.

Refund Policy: Requests for refunds will be honored when received seven calendar days prior to the program. However, another person may be substituted at any time for this program. A $25 administrative fee will be deducted for cancellations. In the unlikely event that this program is cancelled or postponed due to insufficient enrollments or unforeseen circumstances, the university will fully refund registration fees but cannot be held responsible for any other expenses, including cancellation or change charges assessed by airlines, hotels, travel agencies, or other organizations.

For weather or disaster-related program cancellation or postponement information, related program cancellation or postponement information, telephone 540-231-9489. For weather or disaster-related program cancellation or postponement information, related program cancellation or postponement information, please call 540-231-9489.

Instructors
Dr. Brian Bond is an assistant professor at Virginia Polytechnic Institute and State University.

Dr. Fred Lamb is a professor emeritus at Virginia Polytechnic Institute and State University.

For more Information Contact
Brian Bond
Department of Wood Science and Forest Products
Brooks Center, Virginia Tech
Blacksburg, VA 24061
Telephone: 540-231-8752
bbond@vt.edu

Location and Lodging
The classroom portion of this course will be held at the Courtyard by Marriott located at 105 Southpark Drive in Blacksburg, Virginia.

The tour of the solar kiln will be held at the Thomas M. Brooks Forest Products Center, a $5,000 square foot complex on the edge of the Virginia Tech campus in the Corporate Research Center. The Brooks Center houses faculty, staff and students in the Department of Wood Science and Forest Products. The Center contains research laboratories and equipment for conducting research in many program areas of the department. The Center also contains labs for wood base composites manufacture and testing, a high-bay wood engineering lab with full-scale timber testing equipment, the William A. Sardo Pallet Laboratory and the Center for Unit Load laboratory. A new wood drying laboratory was recently completed, with a state-of-the-art laboratory kiln. The Center is named in honor of the late Thomas M. Brooks of Quinton, Virginia, whose life was devoted to the proper utilization of Virginia’s forest resources.

Participants are responsible for making their own lodging reservations. A block of lodging rooms has been reserved at the Courtyard by Marriott in Blacksburg for the rate of $99 plus tax per night. All reservations can be made by calling (540) 552-5222. Reservations must be made by April 2, 2008.

For credit card payments, you may also register at: www.cpe.vt.edu/drysolar/

Please print or type—complete a separate form for each participant or register online at www.cpe.vt.edu/drysolar/

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Register Today!

Sixth Drying Lumber with a Solar Dry Kiln

April 24-25, 2008

Please print or type—complete a separate form for each participant or register online at www.cpe.vt.edu/drysolar/

Name

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Registration fee: $125

Method of payment: Payment of registration fees is required prior to program attendance. Registration will be processed when payment is received.

❑ Check enclosed (Make payable to: Treasurer, Virginia Tech CE)

❑ Credit Card: VISA MC AmEx

Card No. Exp. Date

Cardholder name

Cardholder signature

Cardholder title

Return with payment by April 10, 2008 (no staples, tape, or paper clips, please) to:

Conference Registrar

Continuing and Professional Education

Virginia Tech, Mail Code 0272

702 University City Blvd.

Blacksburg, VA 24061

Phone: (540) 231-5182

Fax: (540) 231-3306 (For credit card registrations only)

*Necessary to process a refund payable to any company, agency or government.

Virginia Tech does not discriminate against employees, students, or applicants for admission or employment on the basis of race, gender, disability, age, veteran status, national origin, religion, sexual orientation, or political affiliation. Anyone having questions concerning discrimination should contact this Office of Equal Opportunity. If you are a person with a disability and require any auxiliary aids, services, or other accommodations for this workshop, please discuss your accommodation needs with Liz Fillman at (540) 291-3087 by two weeks prior to the course.

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