

**Snell Level I Infrared Training Course**  
**Sept. 17 to 20, 2012**  
**Garden Grove / Anaheim, CA**

Innovation Products (Riverside, CA) will be sponsoring this class to help its customers become more proficient in the basic use and practical applications of using a thermal imager. This course is for the current and prospective users of IR Cameras.

Learn the principles of how to Think Thermally, basic heat transfer theory, electrical applications, mechanical equipment, building systems, roof inspections, use of thermal imaging equipment, and proper image acquisition. Includes the Snell Certification Standard upon completion of course.

A 32 hour class covering the theory and applications of infrared thermography in the preventive maintenance, quality assurance, condition monitoring, and non-destructive testing of materials fields. This class focuses on qualitative thermography and how to collect data and follow proven and published inspection procedures. Upon completion students will be able to capture clear thermograms and make basic inferences and diagnosis.

Level I material includes infrared theory, heat transfer concepts, and operation of thermal imaging equipment and specific recommendations on how to make quality thermal images that are clear, concise, and easy to interpret. Students are challenged daily with hands on demonstrations, experiments, and inspection situations similar to those they will experience in their work. Students leave Snell training ready to put this amazing technology to work. This course fully meets the educational requirements for certification according to the published recommendations of ASNT.

An overview of the most common applications includes:

- Electrical distribution systems
- Mechanical systems
- Steam systems
- Refractories
- Underground piping
- Active thermography
- Building envelopes
- Low-slope roofs
- Nondestructive testing of materials

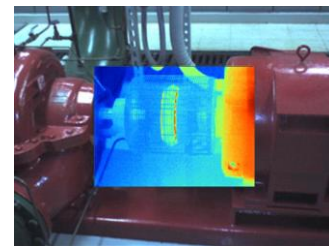
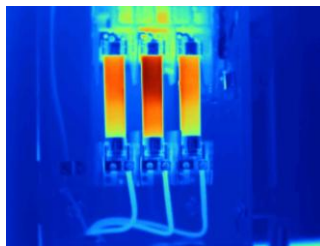
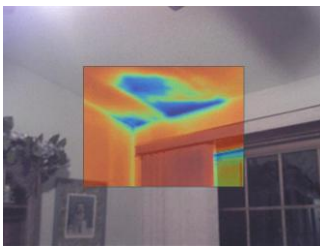
Students learn the basic inspection techniques based on accepted industry and international inspection procedures.

The course is open to everyone, if you own a thermal imager or not. Attendees that do have equipment are encouraged to bring their cameras & PCs as there are a number of hands-on learning opportunities available during the week. Additional cameras will also be available for those that do not have one.

Please see course outline, general schedule, and registration info on the following page:

Course	Description	Price
<b>SNELL LEVEL I</b>	<b>Snell Level I Infrared Training Course (32 Hour Class)</b>	<b>\$1,695 (Per Person)</b>

\*Last date to sign up is 8/31



## **Thermographic Applications for Predictive Maintenance Level I Course Outline**

### **Monday - 9/17**

8:00 a.m. - 5:00 p.m.

- Introduction, course overview
- Keynote presentation: "Thinking Thermally®"
- Introduction to using your imager
- Hands-on equipment use: Basic camera adjustment skills
- Imaging equipment: How imagers work, resolution, sensitivity, optimizing the image
- Heat transfer, Thermal capacitance, State Change, Radiation theory
- Hands on equipment use: Practicing camera adjustment skills

### **Tuesday - 9/18**

8:00 a.m. - 5:00 p.m.

- Hands-on equipment use: Basic camera adjustment skills
- Review and quiz
- Hands-on equipment use: Practicing camera adjustment skills
- Radiation theory, State change
- Basics of radiometric temperature measurements
- Overview of Standards and Practices
- Hands on equipment use: Practicing camera adjustment skills

### **Wednesday - 9/19**

8:00 a.m. - 5:00 p.m.

- Hands-on equipment use: Basic camera adjustment skills
- Review and quiz
- Building diagnostics: Conduction, Air leakage, Conditions for inspections
- Hands on equipment use: Refining camera adjustment skills
- Inspecting electrical systems: Safety. Patterns, Conditions
- Hands on equipment use: Practicing camera adjustment skills

### **Thursday - 9/20**

8:00 a.m. - 5:00 p.m.

- Review
- Hands on equipment use: Refining diagnostic skills
- Mechanical inspections: Motors, Rotating equipment, Fluid flow, Steam traps, Refractory
- Roof inspections: Safety, Conditions, Conducting an inspection, Patterns, Aerial work
- Overview of Nondestructive Testing (NDT) of composite materials
- Hands-on equipment use: Snell Standard Certification Practical examination (optional)
- Reports, routes and prioritizing findings
- Course Review / Course Test
- Snell Standard Certification Specific examination (optional)

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### **Registration Info:**

The training will be held at the Sheraton Garden Grove-Anaheim South (12221 Harbor Blvd. Garden Grove, CA 92840). The Sheraton is just one mile south from the Anaheim Convention Center and a five-minute shuttle ride to the Disneyland Resort. For more information, please contact (714) 703-8400 or visit their website at [www.sheratongardengrove.com](http://www.sheratongardengrove.com).

Continental Breakfast and mid-afternoon coffee will be included. Lunch will be available at the hotel restaurant at the attendee's cost. Also, a block of rooms will be available at a special rate. That information will be given out once you are registered for the course. Complimentary parking is also included.

If you have any questions please contact Alex Johnson at (951) 682-8506 or [sales@innovation-products.com](mailto:sales@innovation-products.com)

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innovation products inc.  
sales & engineering representatives

**For Internal Use Only**

Taken by: \_\_\_\_\_  
Date: \_\_\_\_\_  
Referred by: \_\_\_\_\_

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Sept. 17 to 20, 2012**

**Attendee Information**

Company:		
Name:		
Thermal Imager (Make & Model):		
Phone:	Fax:	
Email Address:		
Address:		
City:	State:	Zip:

**Bill To (Credit Card Only)**

Name:		
Phone:		
Billing Address:		
City:	State:	Zip:

P.O. Number: \_\_\_\_\_

American Express     Discover     MasterCard     Visa

Card #: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ Security Code: \_\_\_\_\_

Name of Card Holder: \_\_\_\_\_

Course	Description	Price
SNELL LEVEL I	Snell Level I Infrared Training Course (32 Hour Class)	\$1,695 (Per Person)

Payment Terms: Payment is due in full 14 days before the start of the course. We accept checks, AMEX, Discover, Visa, and MasterCard as our preferred payment option. Purchase orders are accepted with approved credit. No seats will be held for a student until payment is received. Innovation Products is not liable for transportation or related costs if this class is cancelled. Tuition is non-refundable within 2 weeks of the course.

**Please make payment to:  
Innovation Products, Inc.  
3367 Chicago Ave.  
Riverside, CA 92507  
Phone: 951-682-8506  
Fax: 951-682-8570  
sales@innovation-products.com**