

Course Name: **What Makes a Thermoplastic Roof Sustainable? (SIK134)**

Learning Units: 1 LU/HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Course Learning Objectives:

- The importance of proven performance and membrane durability (the longer the roofing system lasts, the less roofing systems end up in a landfill)
- Understanding the difference between Post-industrial, Pre-consumer and Post-consumer recycling and the benefits of choosing a product that recycles post-consumer back into new membrane (full circle recycling).
- A knowledge of the natural fire resistant properties of some roofing membranes and a review of how different fire resistant roofing membranes perform when actually on fire.
- An understanding of the term "life-cycle" and how specifying a roofing system that has a low impact on life-cycle is beneficial not only for environment, but an owner's wallet.

Course Name: **Separating Cool Roofing Facts from Myths (SIK137)**

Learning Units: 1 LU/HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Course Learning Objectives:

- Understanding the concept of "cool roofing", how they function and how they are defined and qualified in various energy and environmental codes and standards
- Assess the potential environmental impacts of broad implementation of cool roofing strategies
- Evaluate the energy benefits of cool roofing materials in northern climates
- Review the performance of some cool roofing materials in practice over the past decades



Course Name: **Thermoplastic Commercial Roofing Systems (SIK126)**

Learning Units: 1 LU

Course Length: One hour

HSW: No (health, safety and welfare)

Course Learning Objectives:

- Customers will obtain a better understanding of what a single-ply roofing system is and what are the advantages.
- How membrane formulation and manufacturing differences can play a big impact on the performance of a roofing system.
- The different types of attachment methods for roofing systems and when to use one versus the other.
- Important points to consider when choosing the right roofing systems for your project.

Course Name: **Economical & Eco-Friendly Roofing Systems (SIK127)**

Learning Units: 1 LU/HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Course Learning Objectives:

- Learn about how the single-ply roofing market and how it has changed in the last 15 years.
- Be able to identify sustainability and economic drivers when evaluating roofing systems.
- Be able to understand the features and benefits of an ecologically-friendly roof.
- Be able to understand how an eco-friendly roof delivers sustainable and economic value – today and tomorrow.



Course Name: **The Facts about PVC and the Environment (SIK135)**

Learning Units: 1 LU/HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Course Learning Objectives:

- Discussion about how polyvinyl chloride (PVC) is the most commonly used plastic in the construction industry and if it imposes a burden on our environment.
- Learn what third party test results say about PVC.
- Understand how PVC is actually one of the more sustainable construction products being used.
- Learn how to accurately evaluate both sides of the PVC argument to make an educated judgment.

Course Name: **The Differences Between Wind Warranties and Wind Uplift Requirements for Roofing (SIK125)**

Learning Units: 1 LU/HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- Chapters 15 and 16 of the International Building Code that discuss the requirements for wind performance will be reviewed and how these requirements ultimately protect your building. The basic calculations for ASCE requirements will be compared while comparing the two versions and then comparing to FM Global
- Attendees will learn the differences between the 2005 and 2010 ASCE wind maps as well as FM Global wind maps and what that means for building codes in your part of the country.
- Wind Up-lift test methods simulate real world occurrences in an effort to prevent a catastrophe to a building from wind. A review of the various accepted methods will be discussed.
- Attendees will then learn how the testing methods that lead to the codes/approvals correlate to real world problems and failures.



Course Name: **Simulated Standing Seam Metal Roofs (SIK130)**

Learning Units: 1 LU

Course Length: One hour

HSW: No (health, safety and welfare)

Learning Objectives:

- Single-ply thermoplastic roof systems benefits and their use as an aesthetic element to a building
- Simulated metal roof system components and what to look for when choosing the right system
- The history of standing seam metal roofs and their pros and cons as a roof system
- Cost comparison between metal and single-ply systems on different types of roof designs

Course Name: **Exploring Concrete Roof Deck Moisture Issues (SIK129)**

Learning Units: 1 LU

Course Length: One hour

HSW: No (health, safety and welfare)

Learning Objectives:

- Review past and present construction practices where the roof deck is structural concrete, with the emphasis on the effects of excess water in the roof system.
- Point out the difference between normal and lightweight structural concrete as well as their different curing and drying times?
- Discuss different techniques with new construction and re-roofing. Which technique should be used when installing a roof system over a concrete deck?
- Study the standard test methods available to determine the amount of moisture that may be present in the concrete.



Course Name: **Solar Roof Systems – The Good, The Bad and the Ugly (SIK131)**

Learning Units: 1 LU|HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- What are some common problems that may be encountered with solar roof installations.
- What information should you know about your building/roof to determine if your facility is suitable for rooftop photovoltaics.
- Important questions you need to ask the solar installer before you decide on a system.
- Does my roof warranty cover a solar roof installation and if not, what can I do
- New developments in the industry that can eliminate most if not all of the concerns around a solar roof installation.

Course Name: **PVC and KEE Roofing: What Really is the Difference? (SIK132)**

Learning Units: 1 LU|HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- Participants will learn about the ingredients and manufacturing process for PVC/KEE and how they are better for the environment than other alternatives.
- Other than keeping the elements out of your building, roofing membranes have other important functions like wind resistance and fire performance. Participants will learn all about how key functions are achieved by what the membrane is made from and constructed.
- Performance and longevity is a key attribute in determining how sustainable a product is. Participants will be presented with examples of field performance, and introduced to the concept of reference service life and its importance in cradle to grave Life Cycle Assessments (LCA) and Environmental Product Declarations (EPDS)
- Recycling of a product at the end of its service life and keeping it out of a landfill is another key attribute of how sustainable a product is. Participants will learn about recycling initiatives and a state-of-the-art post-consumer recycling program.



Course Name: **Modified Bitumen Roofing: What to consider when choosing? (SIK133)**

Learning Units: 1 LU

Course Length: One hour

HSW: No (health, safety and welfare)

Learning Objectives:

- Understand what a bituminous membrane is made of and be able to choose the correct product to keep the roof watertight.
- Learn the differences between APP and SBS i.e., temperature exposure, weather resistance, and when to use each type.
- Learn how a reinforcement can impact the performance of the modified bituminous membrane.
- Get an overview of the different application methods to decide what's the best solution for the building.

Course Name: **An Overview of Protected Membrane Assemblies (SIK141)**

Learning Units: 1 LU | HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- Define the components (and their functions) that comprise a PMR assembly that combine to create a durable, long-lasting roof
- Define the types of PMR assemblies that are available and explain how they may be utilized in a variety of energy-efficient roofs, blue roofs, cool roofs, and solar panel installations
- List the three key elements of a successful waterproofing installation
- Discuss the benefits of a PMR assembly, including how it can contribute to LEED (REGISTERED TRADEMARK SYMBOL) certification



Course Name: **Vegetated Roofs- Sustainable Design Considerations (SIK140)**

Learning Units: 1 LU | HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- Describe how vegetated roofs reduce stormwater run-off, dust/smog levels, and re-oxygenate the air
- Explain the design considerations and standards relating to vegetated roofs
- Explain how vegetated roofs diminish the urban heat island effect: a major environmental issue
- List and define the types/components of vegetated roofs, as well as the environmental, technical, and owner/occupant benefits of vegetative roofs

Course Name: **Adding Resiliency on the Roof: Vegetated Roofs and Blue Roofs (SIK142)**

Learning Units: 1 LU | HSW

Course Length: One hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- How rooftops can address challenges in urban stormwater management.
- Importance of a good roofing membrane
- How vegetated roofs can play a role in green infrastructure
- The major components of vegetated roofs and Vegetated roof options for handling stormwater

Course Name: **Stormwater Management Solutions for Rooftops (SIK143)**

Learning Units: .5 LU | HSW

Course Length: One half hour

HSW: Yes (health, safety and welfare)

Learning Objectives:

- Describe how Vegetated Roofs and Blue Roofs reduce stormwater run-off, improve the resilience of urban and suburban stormwater infrastructure, and provide environmental benefits.
- Explain the ways in which a rooftop can be transformed into rain catching areas.



Course Name: **Benefits of Liquid Applied Roofing and Waterproofing (SIK144)**

Learning Units: 1 LU

Course Length: One hour

HSW: No (health, safety and welfare)

Learning Objectives:

- Understand the basic concept of reinforced liquid-applied roofing and waterproofing systems
- Be exposed to the various resin chemistries and reinforcement types available in the marketplace.
- Become acquainted with the range of applications that liquid-applied roofing and waterproofing systems lend themselves to.

All Courses:

How Taught: Courses are given in person as PowerPoint presentation. Actual product samples are available to demonstrate on request.

A/V Needed: Electrical power and screen for PowerPoint presentation. (the CES facilitator supplies the laptop and projector)

Target Audience: Architects, consultants, engineers, specifiers, etc.

Cost: N/A; there is no charge to bring this program to your firm or chapter meeting.

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