

Certified Extreme Event Modeler Program

Meeting the growing need for talent in catastrophe modeling & risk management



The increased focus on extreme event risk management by corporate boards, executives, rating agencies, and regulators has fueled a growing need for skilled catastrophe modelers. New regulatory regimes around the world require companies to demonstrate robust risk management practices and a comprehensive understanding of the modeling process and associated assumptions and uncertainties. That's why Verisk established Verisk's CEEM Program, with the mission to be a center of excellence for extreme event risk management training and education.



Verisk's Certified Extreme Event Modeler™ (CEEM™) Program is an intensive and interactive program designed to prepare the next generation of modelers for tomorrow's risk management challenges. More than just end-user training, the program explores the inner workings of the models, delving into such topics as catalog generation, accounting for uncertainty, advanced analysis options, and interpreting model results.

Upon successful completion of the coursework and final exam, attendees become Certified Extreme Event Modelers, immediately prepared to add even more value to their organizations.

Catastrophe risk management professionals completing the program gain:

- A more detailed understanding of the science and technology underlying the models
- Skills in handling and optimizing the exposure data entering the models and software
- An appreciation of the impact of exposure data quality on the accuracy of modeled results
- In-depth knowledge of the nature of analysis options and assumptions and their impact on model results
- Efficiency in importing and exporting data and optimizing analysis runtimes
- Ability to apply best practices in gathering and interpreting the output of model analysis
- Improved preparation for discussions with rating agencies
- Practical expertise with Touchstone® and Touchstone Re[™], including modeling of complex business situations
- The background necessary to synthesize and communicate analysis results to senior management

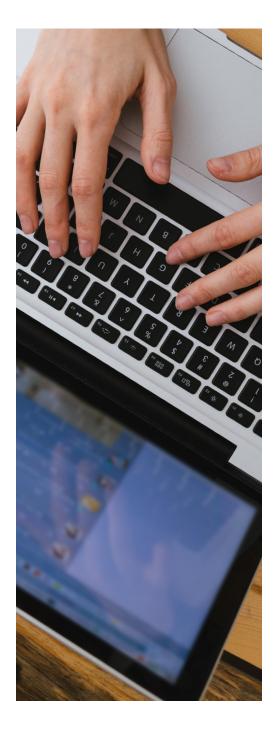
The bottom line:

A Certified Extreme Event Modeler will have the necessary tools to employ and communicate best practices in catastrophe management throughout organizations concerned with risk.

Who should attend?

Anyone with responsibility for catastrophe risk analysis, management, and decision-making will benefit from Verisk's CEEM Program, including:

- · Insurance financial managers
- Actuaries
- Underwriters
- Catastrophe modeling managers and analysts
- Insurance and reinsurance brokers
- Regulators





Additional benefits to attendees

- Recognition as a Certified Extreme Event Modeler (CEEM)
- Eligibility for Continuing Professional Development credits from:
 - American Institute for Chartered Property Casualty Underwriters (CPCU)
 - American Academy of Actuaries (AAA)

Benefits of employing certified modelers

- Better data quality control and validation to support internal and external catastrophe analysis
- Improved efficiency and throughput in the catastrophe modeling function
- Fuller scrutiny of sensitivity of the results to changes in modeling data and analysis assumptions
- New insights as modeling capabilities extend to more complex business and financing scenarios
- Crisper and clearer communication of the major conclusions regarding catastrophe risk

Verisk's CEEM program details

Program structure

Verisk's CEEM Program's core curriculum consists of five full days' worth of sessions. A mix of lectures, interactive demonstrations, and hands-on exercises with Verisk extreme event models and software will bring each of these topics to life for certification candidates.

The Program assumes prior knowledge of catastrophe modeling and Touchstone and Touchstone Re. Students who are unfamiliar with either of these, or who have never attended one of our software training sessions, are encouraged to complete a small number of prerequisite classes offered as online (on-demand) tutorials. These are designed to introduce the student to catastrophe modeling in general and Touchstone and Touchstone Re in particular and will help ensure that all attendees arrive with a suitable level of background knowledge.

Following the core sessions, students will be required to take at least three elective sessions, which may be offered at Verisk Envision and online. These are designed to allow attendees to tailor their educational experience to suit their interests and needs, and to delve more deeply into selected topics than is possible during the core sessions.

A comprehensive final exam will assess students' understanding of the program material.

Faculty

Each unit of the core curriculum is led by a senior Verisk professional from our extreme event solutions team experienced in the relevant topics, many with PhDs in their fields. Instructors are supported by teaching assistants offering on-demand one-on-one tutorial support for the lectures and exercises. Periodic quizzes are also completed with faculty assistance to reinforce learning and retention.

Logistics and hospitality

For in-person programs, breakfast and lunch are provided on each of the five classroom days, with a welcome reception on Monday and a celebration dinner on Thursday. Dress code is casual. It is recommended that attendees arrive Sunday night and depart late afternoon or evening on Friday, as each day's activities begin at 9 a.m. and end about 6 p.m. local time.

Verisk's CEEM program structure

Online preparation: extreme event modeling 101

Offered online, Extreme Event Modeling 101 addresses the key concepts that students need to understand before attending the program on-site.

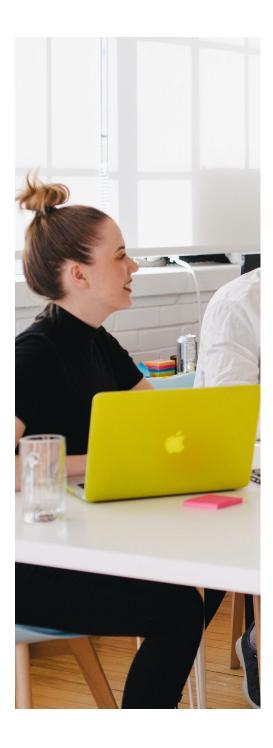
For those attendees of the Certified Extreme Event Modeler Program who are new to the world of extreme event modeling, this on-demand recorded session, made available prior to attending the program in person, introduces program participants to key concepts underlying catastrophe models and modeling. We discuss the history of the industry, the high-level framework of a catastrophe model, and the motivation for using models. This session also examines the current state of the catastrophe modeling industry and its likely future direction and provides an introductory-level tutorial on detailed and aggregate loss analysis methodologies, which provide the foundation for live sessions

The knowledge gained from these classes will be assessed by way of an online test. A passing grade is a prerequisite to attending the core and elective sessions.

Core curriculum

The centerpiece of the program is the core curriculum delivered by Verisk extreme event solutions team experts. The curriculum covers the material that all CEEMs should be expected to know and provides the springboard for students to explore the elective classes. Each time zone in which Verisk's CEEM program is held offers the core classes that are relevant for the region.





Elective classes

A number of sessions at each Verisk Envision Conference will be designated as "Verisk's CEEM Program Electives." They will reflect the latest developments in the science behind the models and other aspects of catastrophe modeling. Students must take at least three elective classes either in person or through Verisk's online portal. The knowledge gained from these classes will be assessed as part of the final CEEM Program exam.

Core classes

- Introduction to Tropical Cyclone Modeling
- · Introduction to Earthquake Modeling
- Introduction to Inland Flood Modeling
- Atmospheric Perils Vulnerability
- Understanding Exposure Data
- Touchstone Under the Hood
- Touchstone Re Under the Hood
- Financial Modeling and Uncertainty in Catastrophe Models
- Interpreting Model Results
- · Real-Time Catastrophe Modeling

Registration

The core classes for Verisk's Certified Extreme Event Modeler Program will be offered at different times and locations throughout the year. <u>Visit our website</u> for this year's schedule and to register online.

As seats are limited and in high demand, cancellations are not accepted once a seat is reserved. However, a paid registration may be deferred to a later session or transferred to another professional from the same organization. Please contact your <u>Verisk representative</u> to learn about registration fees.

We look forward to your attendance and to your joining the growing ranks of Verisk's Certified Extreme Event Modelers!

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