The RMS CCRA® Training Program

Certified Catastrophe Risk Analyst Training

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The RMS Certified Catastrophe Risk Analyst (CCRA®) Training Program is a comprehensive curriculum designed to fast track individuals with an intermediate level of catastrophe modeling experience to an advanced understanding of models and modeled loss estimates. Participants gain a solid foundation of core concepts essential for interpreting and applying loss estimates, and become skilled at the critical assessment of assumptions that affect catastrophe model results.

The CCRA Training Program reflects current trends in catastrophe modeling and the insurance industry, as well as concepts specific to RMS models and software. Although objectives are reinforced using the RiskLink® software platform and other RMS products, CCRA materials are broadly applicable to a range of catastrophe modeling disciplines.

Individuals who complete the program are eligible to sit for an exam, and upon passing, earn the CCRA designation. Since its introduction in 2005, the designation has gained insurance industry recognition as a symbol of excellence in the field of catastrophe modeling.

The CCRA Training Program helped me to understand RMS' modeling methodologies; I found the financial modeling course particularly enjoyable.

- Celso Moreira
Senior Vice President and Chief Risk Officer
QBE Americas

The CCRA Training Program is a very efficient way for a catastrophe modeler to gain comprehensive knowledge of RMS models. The accreditation helps set a professional standard in this field and forms an important part of the training program for all of our analysts.

- Keith Leung
Partner
JLT Re

Participant Benefits

- Increase understanding and expertise in catastrophe risk analysis and management
- Interface directly with RMS experts through small, instructor-led courses
- Network with a cross-section of industry peers
- Earn the Certified Catastrophe Risk Analyst (CCRA®) designation upon passing an exam
- Access annual updates of CCRA Training Program materials to stay current with industry developments

Sponsor Benefits

- Reduce internal training time and overhead
- Ensure consistent, high-quality training for catastrophe analysis teams
- Realize maximum value from investments in catastrophe modeling technology
- Equip team members with full command of underlying modeling assumptions and processes
- Formally recognize employees with advanced skills in catastrophe modeling

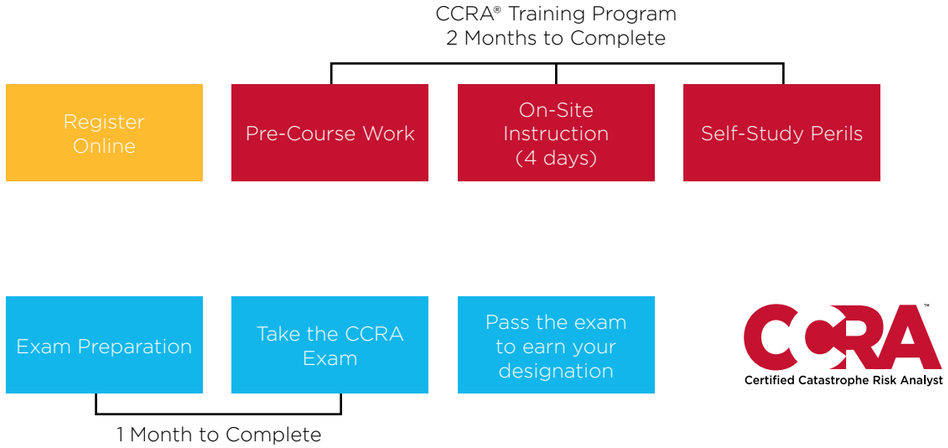
Program Requirements

Only licensed RMS clients are eligible to attend the CCRA Training Program. In addition, RMS strongly recommends that participants have at least one year of catastrophe modeling experience, preferably using RiskLink® software.

CCRA® Training Program Course Overview

The CCRA Training Program is divided into three consecutive modules: Exposure Data, Modeling Foundations, and Perils. Details of each module, including courses offered, course objectives, access to materials, and methods of instruction, are listed in the following tables.

CCRA Training Program materials are updated annually to reflect the latest version of RMS products, current market issues, and feedback from clients who have participated in the program. All program participants benefit from continued access to updated materials as long as they remain clients of RMS.



Accreditations and Affiliations

- **Chartered Insurance Institute**: Individuals who earn the CCRA designation are eligible for 30 nonspecific credits at the Diploma in Insurance level from the Chartered Insurance Institute (CII).
- **Chartered Property Casualty Underwriters Society**: All participants who complete the program and hold the Chartered Property Casualty Underwriter (CPCU) designation are eligible for 15 continuing professional development (CPD) credits.

How Does the Program Work?

The CCRA Training Program includes a total of twelve courses, nine of which are mandatory for program completion. Three courses are offered on-site at select RMS offices; the remaining nine are self-paced, with course materials accessible by download from a password-protected area of RMS Owl. In total, the program spans approximately two months. Upon completion of the program, participants are eligible to sit for the CCRA exam, which is offered multiple times a year at select RMS offices worldwide. For the current schedule of locations, dates, and fees, please visit the Training page in RMS Owl https://support.rms.com/group/rms/training-dashboard.

"In learning the mechanics behind the model, particularly with respect to data quality, we now understand which variables have the biggest impact on our modeled losses. As a result, we have streamlined our processes, thereby freeing up our technical department and me for more cost-effective projects."

- Leah Nelson
Vice President, Systems & Catastrophe Modeling
Arrowhead General Insurance Agency, Inc.

Exposure Data Module

Method	Course	Objectives
• Self-paced • Materials available by download from RMS Owl • Prerequisite for Modeling Foundations module	Exposure Data Analysis	• Understand the challenges and issues surrounding exposure data analysis • Gain familiarity with different types of exposure data and how to manage and analyze each type at the location, account, policy, and portfolio level • Address the relevant data quality issues that impact catastrophe-exposed property and casualty data
	Geocoding and Hazard Retrieval	• Understand the implementation of geocoding information in catastrophe risk analysis applications, and its correlation to hazard data assignments on a global basis • Review relevant business application mapping and reporting products and analyze the integration of hazard data into underwriting guidelines • Examine the impact of geocoding and hazard exposure data assignments on analysis results
	Accumulation Management	• Understand multi-line accumulation management applications for both natural and man-made catastrophes • Gain an appreciation for accumulation management tools and practices currently available, as well as challenges the industry faces in trying to understand portfolio aggregates

Modeling Foundations Module

Method	Course	Objectives
• Instructor-led • Four consecutive days of classroom instruction, including interactive review of Exposure Data module • Offered on-site at select RMS offices • Prerequisite for Perils module	Financial Modeling	• Explore the principles of catastrophe risk financial modeling to gain a better understanding of how regional and market practices impact losses • Review different methodologies for applying a financial model; uncertainty and its impact on losses; modeling complex financial structures; and the impact of modeling aggregate data through a detailed model • Investigate financial model issues during the post-analysis phase of the catastrophe risk modeling process
	Uncertainty Measures	• Gain a solid understanding of the various ways in which uncertainty is calculated and quantified in modeling • Review details of how uncertainty affects loss results • Evaluate real-world examples of what the quantification of uncertainty means to those who rely upon catastrophe model results for making business decisions
	Catastrophe Modeling Applications	• Integrate all previous course concepts to apply model loss results to a variety of business situations • Review key financial model statistics and the proper use of these statistics • Apply catastrophe modeling concepts through a group project that analyzes data from the insurer's and reinsurer's point of view

Perils Module

Method	Course	Objectives
• Self-paced • Minimum of three courses required • Materials available by download from RMS Owl	Earthquake	For details regarding the specific course curriculum, visit RMS Owl at https://support.rms.com/group/rms/training-dashboard. General objectives for each of the peril model courses include the following: • Advance knowledge and understanding of the natural or man-made event • Review the methodologies that can be employed to create a robust event set • Understand the local site effects that cause damage • Examine the process through which damage is translated into financial loss • Enhance understanding of inherent uncertainties and the appropriate application of loss results • Discuss application of models for pre and/or post-event loss modeling • Reinforce key concepts through interactive, hands-on exercises
	Extra-Tropical Cyclone	
	Flood	
	Severe Convective Storm	
	Terrorism	
	Tropical Cyclone	

ABOUT RMS

RMS is the world's leading provider of products, services, and expertise for the quantification and management of catastrophe risk. More than 400 leading insurers, reinsurers, trading companies, and other financial institutions rely on RMS models to quantify, manage, and transfer risk. As an established provider of risk modeling to companies across all market segments, RMS provides solutions that can be trusted as reliable benchmarks for strategic pricing, risk management, and risk transfer decisions.

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