CENTER FOR INSURANCE POLICY AND RESEARCH
CATASTROPHE MODELING
CENTER OF EXCELLENCE

NAIC
NATIONAL ASSOCIATION OF
INSURANCE COMMISSIONERS

Catastrophe Modeling Center of Excellence (COE)

CAT 101 - Beginner

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	Online	In-person
Availability	Registration Link	Available now from CAT COE
Duration	Self-paced	1.5 to 2 days
Educational Credits	3.2 CE	10-13 CE
CAT 101 Certificate	Passing of the online test	

Contact to find out more:

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CAT COE

Overview

CAT 101 is designed by NAIC's CAT COE to provide a broad overview of catastrophe models and use of catastrophe models in assessing and managing that risk within the (re)insurance industry from (a) pricing/ratemaking, (b) risk transfer and portfolio management, (c) capital adequacy and solvency assessment regulatory and rating agency framework (d) in risk mitigation and building resiliency.

Targeted Audience

The targeted audience within state insurance departments include:

- Rate Filing Regulators and Actuaries
- Financial (Analysts and Examiners) and Market Conduct Regulators
- Public Policy Research Regulators

Benefits

- Building foundational knowledge of catastrophe models
- Complete prerequisites for the next level of catastrophe modeling training curriculum (CAT 201 - Intermediate)

Unit1 – Introduction to Catastrophe Risk and Catastrophe Models

1. What catastrophe risk is and why it is important to manage catastrophe risk
2. Key historic catastrophe events and insurance industry needs that led to the evolution and development of catastrophe models
3. Key model vendors and key perils for which models exist

Unit2 – Anatomy of Catastrophe Models

1. CAT model building blocks
2. Model inputs and the importance of data quality and its impact on modeling results
3. Interpret model outputs and various model output metrics
4. Describe model constraints and model sensitivity

Unit3 – Application of Catastrophe Models within the industry

1. CAT Models and insurance ratemaking
2. CAT models to evaluate capital adequacy and solvency assessment
3. CAT models for Portfolio management, including risk transfer, reinsurance purchase
4. CAT models for mitigation studies and resiliency planning

Prerequisites

The only prerequisite for this beginner level course is basic knowledge of insurance and risk transfer concepts.

Overall Learning Objectives

• Explain what catastrophe risk is and why it is important to manage catastrophe risk.
• Outline catastrophe models and their components including input and output.
• Discuss use of catastrophe models within industry and regulatory framework.

Structure

Three-unit modular course that builds on concepts around importance of managing catastrophe risk, evolution of catastrophe models, component of catastrophe models and real-world application within the industry.