



भारतीय बीमा संस्थान  
**INSURANCE  
INSTITUTE OF  
INDIA**

# Seminar on Actuarial Education and Cutting-edge Technologies for the Insurance Sector

Monday, 1<sup>st</sup> July, 2024

Venue: III Auditorium, Insurance Institute of India,  
'G' Block, Plot No. C-46, Bandra-Kurla Complex,  
Bandra (East), Mumbai – 400051.

To Register

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**Insurance Institute of India (III)** was formed in 1955 as a Federation of Insurance Institutes for the purpose of building academic and professional capacity for the insurance industry. III is recognized by the Indian Insurance Industry, SAARC countries and many other developing insurance markets, as a pioneer in insurance education, responding to the academic needs of the industry as well as addressing the causes of building and developing professionalism. III certifications are internationally recognized.

**College of Insurance (COI)**, the training arm of III, founded in 1966, provides training in all technical and functional domains of Insurance. A large number of private and public sector insurers, brokers, surveyors, purchasers of insurance and others in India and abroad benefit from COI's classroom sessions, workshops, seminars, industry research and knowledge sharing activities. COI has a campus in Kolkata, mostly catering to the academic needs of the Eastern and North Eastern Regions of India and those of the neighbouring countries.

**SEMINAR CATEGORY: Look Beyond (LB):** Institute's Look Beyond type of seminars are conducted on proactive or futuristic themes related to new areas of insurance. They focus on an existing challenge, an emerging situation or an elusive problem. This seminar titled '***Actuarial Education and Cutting-edge Technologies for the Insurance Sector***' comes under this category.

## SEMINAR ON ACTUARIAL EDUCATION AND CUTTING-EDGE TECHNOLOGIES FOR THE INSURANCE SECTOR

**CONTEXT OF THE SEMINAR:** Actuarial Science plays a crucial role in evaluating and managing risks across various industries. Historically, the predictive nature of insurance business has made it relatively more familiar with Actuarial Science and some of its applications. However, in today's world where many industries are harnessing the power of technologies like artificial intelligence, quantum computing, biotechnology, nanomedicine, gene editing, personalized medicine, carbon capture and interplanetary missions for delivering better value to their customers and shareholders, arguably, insurers have been lagging behind in using cutting-edge technologies for enhancing their relevance.

Actuarial Science is today being used in the insurance industry for multiple functions. Some of them are highlighted below.

- **Assessing and managing risk:** Assessing the possible impact of multiple risks that are transferred to and accepted by the insurance mechanism, along with the probable frequency and severity of adverse incidents has been a traditional area where actuarial science has been used. Actuaries analyse data related to mortality and morbidity rates, future events, and financial outcomes. They use mathematical models to predict the probability of events such as accidents, illnesses, natural catastrophes, etc.
- **Designing and pricing insurance products:** The deep learning of risks and the various probabilities that emanate from such analyses, combined with an understanding of the market, help insurance companies in designing insurance products and pension plans, and determining appropriate pricing for them.
- **Liability Analysis:** Actuaries evaluate the financial and economic implications of future events for financial organizations. This helps in improving decision-making and managing liabilities effectively.
- **Claims Reserving:** Actuarial insights in forecasting the probability of a loss making event occurring help insurance companies in estimating when they might need to pay out insurance claims and allocate the necessary funds optimally.

- **Modern-day usages of Actuarial Science** include making assessments of financial and market risks using mathematical and statistical methods. These help in making better investment decisions, as well as in assessing future values of assets and liabilities. Actuarial Science is also being used for measuring cyber risks and climate risks by integrating of diverse sets of disparate data, and using risk modelling tools for analysing their possible interplay.
- **Actuarial Education:** Actuarial education traditionally focuses on mathematical and statistical principles, with an emphasis on risk modelling and financial analysis. Artificial Intelligence (AI) is reshaping actuarial education and professional development by integrating data science, machine learning, and predictive analytics into the curriculum, providing personalized learning experiences through AI-powered platforms, enabling sophisticated simulation and scenario analysis, facilitating continuous learning and knowledge sharing, and promoting ethical and regulatory compliance.
- As actuaries embrace AI tools and technologies, they become better equipped to navigate the complexities of modern risk management and drive innovation in the insurance and financial industries. In this background, acquiring academic knowledge on Actuarial Science and integrating the learning with the practical challenges faced by the industry as well as aligning with modern day technologies are among the imperatives for today's insurance industry.

All through the 68 years of its existence, Insurance Institute of India (III) has been in the forefront in discussing critical issues confronting the industry. In the context of celebrating its 69<sup>th</sup> Foundation Day on the 30<sup>th</sup> of June 2024, it was considered appropriate that III invites industry seniors to examine how the power of Actuarial Science can be used for improving the impact of insurance for the country and those who need it most. This Look Beyond category of seminar on the '**Actuarial Education and Cutting-edge Technologies for the Insurance Sector**' is presented in this context.

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**Tentative Schedule – 1<sup>st</sup> July 2024**  
**Panel Discussion on the topic Actuarial Education and Cutting-edge Technologies**  
**for the Insurance Sector**

**Registration**

09.00 am to 09.30 am

- Meet and Greet over tea and snacks

**Welcome Address & Lighting of the lamp**

09.45 am to 09.55 am

- Mr. S.N. Satpathy, Secretary General, Insurance Institute of India

**Chief Guest**

09.55 am to 10.10 am

- Mr. Siddhartha Mohanty, President, Insurance Institute of India and Chairperson, Life Insurance Corporation of India

**Guest of Honour**

10.10 am to 10.20 am

- Mr. S.N. Bhattacharya, Secretary General, Life Insurance Council

**Guest of Honour**

10.20 am to 10.30 am

- Mr. Inderjeet Singh, Secretary General, General Insurance Council

**Guest of Honour**

10.30 am to 10.45 am

- Mr. R. Arunachalam, President, Institute of Actuaries of India

**Keynote Speaker**

10.45 am to 11.10 am

- Mr. P. K. Arora, Member-Actuary, Insurance Regulatory and Development Authority of India (IRDAI)

**Vote of Thanks**

11.10 am to 11.15 am

- Mr. Prafulla Jaipuria, Director, College of Insurance

**Break**

11.15 am to 11.30 am

- Networking over tea/ coffee

**Panel Discussion: Actuarial Education and Cutting-Edge Technologies for the Insurance Sector**

- Moderator: III Faculty
- Panel Members (to be confirmed)

**Summing up:**

- III Faculty

**Vote of Thanks:**

- Mr. Prafulla Jaipuria, Director, College of Insurance