Asian Institute of Insurance
(Formerly known as Malaysian Insurance Institute)

EV Battery Management System for Underwriter and Actuary

Malaysia
Level 1 - 18, 19, 20 August 2025 (3 days)
Level 2 - 18, 19, 22 September 2025 (3 days)

China
Level 3 - 13 – 16 Oct 2025 (4 days)

TRAINING MODE
Classroom & On-Site Workshop

CPD HOURS:
Level 1 - 22 Hours
Level 2 - 21 Hours
Level 3 - 28 Hours

PROFICIENCY LEVEL:
Mastery

FSF FUTURE SKILLS FRAMEWORK MALAYSIA

31 Prime Skills
15 Power Skills

REGISTERED HRD CORP TRAINING PROVIDER

HRD CORP CLAIMABLE

Training Programme no:
10001567869

PROGRAMME OVERVIEW

As the automotive industry undergoes a transformative shift towards sustainability, understanding electric vehicles (EVs) has become increasingly vital for professionals in underwriting and actuarial roles.

To address this need, **The Asian Institute of Insurance (Aii) and Beijiao Asia Tech (Beijing) Energy Technology CO.LTD**, the implementation and delivery arm for Beijing Jiaotong University School of Electrical Engineering New Energy Institute, renowned for its extensive expertise in EV battery research and training. Together, they have developed insightful programmes tailored specifically for the Malaysian and Asian markets.

This specialized training programme is designed to **equip underwriters and actuaries** with a comprehensive knowledge base and practical skills tailored to the unique challenges associated with insuring and assessing risks in the rapidly evolving EV market.

Key Learning Areas:

- Understanding the internal structure and key components of electric vehicles.
- Exploring insurance policies relevant to EVs within China's regulatory framework.
- Identifying and detecting insurance fraud specific to the EV sector.
- In-depth study of mainstream EV models (e.g., BYD, Tesla) to bridge theory with real-world application.

Hands-On Experience: Participants will engage in an On-Site Workshop to notable industry sites, including BJTU's National Active Distribution Network Technology Research Center, CATL, PICC, a BYD 4S Store, and Ping An, enhancing practical understanding.

Skill Development: The training will focus on risk assessment techniques and the calculation of insurance premiums specific to EVs, equipping attendees for effective underwriting and estimation tasks.

Empowerment for Future Challenges: This programme empowers participants to excel in the dynamic field of electric vehicles and to effectively address emerging risks in the insurance landscape

PROGRAMME OBJECTIVE

This programme is structured into three levels and will be **conducted fully in English**, and you will receive a certification certified by **Asian Institute of Insurance (Aii) and Beijiao Asia Tech (Beijing) Energy Technology CO.LTD** upon successfully completing all three levels.

By the end of the programme, you will be equipped with below knowledge and skills.

Knowledge Acquisition:

1. Structure of Electric Vehicles: Understand the internal structure of electric vehicles and be familiar with the functions and collaborative operation principles of various components.

2. Knowledge of the Three Electric Systems: Understand the working mechanisms and technical characteristics of the battery, motor, and electric control system.

3. Insurance Knowledge for Electric Vehicles: Study various terms and policies of electric vehicle insurance in China.

4. Anti-Fraud Identification Techniques in Insurance: Gain a deep understanding of common means and characteristics of insurance fraud and learn to accurately identify insurance fraud scenarios using professional techniques and methods.

Skill Enhancement:

1. In-depth Learning Based on Mainstream Models: The course focuses on mainstream models such as BYD and Tesla, enabling students to combine real cases to gain a deeper understanding of electric vehicle knowledge.

2. Risk Assessment Capability: Use the acquired knowledge to accurately analyze risk factors associated with electric vehicles, providing risk assessment support for subsequent work.

3. Calculation of Electric Vehicles Insurance Premiums: With a grasp of electric vehicle insurance knowledge and anti-fraud techniques, provide professional technical support for underwriting and estimation work, effectively carrying out related business.

PROGRAMME CONTENT

Level 1 **: EV Battery Management System for Underwriter and Actuary**

Date : **18, 19, 20 August 2025 (3 days)**
Time : 9:00 am – 5:00 pm
Venue : Kuala Lumpur
Training Hour : 22 hours

Programme Outline:

1. Understand basic knowledge of electric vehicles and be able to distinguish between the structural differences of pure electric vehicles and hybrid vehicles.
2. Master the main structure of electric vehicle battery packs.
3. Understand the differences between electric vehicle insurance products in China and the comprehensive commercial vehicle insurance.
4. Grasp the cost structure and risk factors of electric vehicles.

Day	Topic Level 1	Topic Level 2	Topic Level 3	Mode	Hour
Day 1	Online Examination				
	Q&A Online Chat Group				
	1. Basics of Electric Vehicles	1.1 The current status and development trends of the of the Electric Vehicles market	1.1.1 The Current Situation of the Electric Vehicle Market	In Class	1
			1.1.2 Development Trends of ElectricVehicles		1
		1.2 Classification of Electric Vehicles	1.2.1 Battery Electric Vehicles	In Class	2
			1.2.2 Hybrid Electric Vehicles		
			1.2.3 Fuel Cell Electric Vehicle		
			1.2.4 Other types of Electric Vehicles		
		1.3 Structure and Working Principle of Pure Electric Vehicles	1.3.1 The Structure of Battery Electric Vehicles	In Class	2
			1.3.2 The working principle of Battery Electric Vehicles		
		1.4 Structure and Working Principle of Hybrid Electric Vehicles	1.4.1 The structure of Hybrid Electric Vehicles	In Class	2
			1.4.2 The working principle of Hybrid Electric Vehicles		

Continue...

PROGRAMME CONTENT

Level 1 **: EV Battery Management System for Underwriter and Actuary**

Date : **18, 19, 20 August 2025 (3 days)**
Time : 9:00 am – 5:00 pm
Venue : Kuala Lumpur
Training Hour : 22 hours

Day	Topic Level 1	Topic Level 2	Topic Level 3	Mode	Hour
Day 2	2.Introduction to Power Batteries of Electric Vehicles	2.1 Introduction to the Structure of Power Battery Packs	2.1.1 Power battery module (Battery PACK)	In Class	2
			2.1.2 Battery Management System (BMS)		
			2.1.3 Auxiliary components of power batteries		
			2.1.4 Power battery box		
	3. Electric Vehicles Insurance	3.1 Commercial Insurance for Electric Vehicles	3.1.1 Introduction to commercial insurance products for Electric Vehicles	In Class	2
			3.1.2 The differences between commercial insurance for Electric Vehicles and comprehensive		2
			3.1.3 Insurance - Purchasing Recommendations for Electric Vehicles		2
Day 3			3.1.4 Insurance Application Process for Electric Vehicles		2
			3.1.5 Risk Management – Pre-Health Check for Electric Vehicles		2
		3.2 Analysis of the Cost Structure and Risk Factors of Electric Vehicles	3.2.1 Cost Structure of Electric Vehicles	In Class	1
			3.2.2 Analysis of Risk Factors for Electric Vehicles		1
	Examination	Online Examination			
In 1 mth	Q&A	Q&A Online (Chat Group)			

- End -

PROGRAMME CONTENT

Level 2 **: EV Battery Management System for Underwriter and Actuary**

Date : **18, 19, 22 September 2025 (3 days)**
Time : 9:00 am – 5:00 pm
Venue : Kuala Lumpur
Training Hour : 21 hours

Programme Outline:

1. Understand cutting-edge technologies for electric vehicle batteries, motors, and charging.
2. Master the main parameters of electric vehicle power batteries and the causes of battery degradation and solutions.
3. Learn about insurance for charging piles and external power grid failure loss insurance in China.
4. Master the identification methods for anti-fraud in electric vehicle insurance.

Day	Topic Level 1	Topic Level 2	Topic Level 3	Mode	Hour
Day 1	Online Examination				
	Q&A Online Chat Group				
	1. Advanced Knowledge of Electric Vehicles	1.1 Introduction to the Cutting-edge Technologies of Electric Vehicles	1.1.1 Battery technology	In Class	2
			1.1.2 Charging technology		
			1.1.3 Intelligent driving technology		
			1.1.4 Electric drive system technology		
			1.1.5 Intelligent cockpit and vehicle networking technology		
	2. Power Batteries of Electric Vehicles	2.1 Types of power batteries for vehicles	2.1.1 Types of power batteries	In Class	2
			2.1.2 Main parameters of power batteries		
		2.2 The internal structure of the power battery	2.2.1 Positive electrode of the battery	In Class	2
			2.2.2 Negative electrode of the battery		
			2.2.3 Electrolyte solution of the battery		
			2.2.4 Battery case		
		2.3 Battery Degradation and User Usage Recommendations	2.3.1 Causes of battery degradation	In Class	2
			2.3.2 User usage suggestion (Battery balancing)		

Continue...

PROGRAMME CONTENT

Level 2 : **EV Battery Management System for Underwriter and Actuary**

Date : **18, 19, 22 September 2025 (3 days)**
Time : 9:00 am – 5:00 pm
Venue : Kuala Lumpur
Training Hour : 21 hours

Day	Topic Level 1	Topic Level 2	Topic Level 3	Mode	Hour
Day 2	3. Electric Vehicles Insurance	3.1 Analysis of the Current Situation of the Electric Vehicles Insurance Market	3.1.1 Analysis of the Current Situation of the New Energy Vehicles Insurance Market	In Class	2
		3.2 Charging Infrastructure insurance	3.2.1 Loss Insurance for Self - used Charging Infrastructure	In Class	1
			3.2.2 Liability Insurance for Self - used Charging Infrastructure	In Class	1
		3.3 External Power Grid Failure Loss Insurance	3.3.1 External Power Grid Failure Loss Insurance	In Class	1
		3.4 Application of Insurance Anti-fraud Identification Technologies	3.4.1 Methods of Identifying Insurance Fraud	In Class	2
Day 3			3.4.2 Pre - underwriting inspection - Introduction to the detection of Electric Vehicles Power Batteries before insurance underwriting	In Class	2
			3.4.3 Introduction to the development of insurance anti-fraud identification	In Class	2
		3.5 Big data anti - fraud applications in Electric Vehicles	3.5.1 Technical Specifications for the Remote Service and Management System	In Class	1
			3.5.2 New energy data and anti - fraud scenarios	In Class	1
	Examination	Online examination			
In 1 mth	Q&A	Q&A Online (Chat Group)			

- End -

PROGRAMME CONTENT

Level 3 **: EV Battery Management System for Underwriter and Actuary**

Date : **13 - 16 October 2025 (4 days)**
Time : 9:00 am – 5:00 pm
Venue : China
Training Hour : 28 hours

Programme Outline:

1. Conduct field studies at companies such as CATL, BYD 4S stores, China Insurance, and Ping An Insurance.
2. Understand the calculation methods for electric vehicle insurance premiums in China.
3. Be able to perform practical operations according to the underwriting process of electric vehicle insurance.

Day	Topic Level 1	Topic Level 2	Mode	Hour
Day 1	Online Examination			
	Q&A Online Chat Group			
	1. On-Site Workshop	1.1 On-Site Workshop at the National Active Distribution Network Technology Research Center of Beijing Jiaotong University	On-Site Workshop	4
		1.2 On-Site Workshop at an authorized service station of Contemporary Amperex Technology Co., Limited (CATL)		4
Day 2		1.3 On-Site Workshop at BYD 4S Store		4
		1.4 On-Site Workshop at the People's Insurance Company (Group) of China		4
Day 3		1.5 On-Site Workshop at Ping An Insurance (Group) Company of China		4

北京交通大學 BEIJING JIAOTONG UNIVERSITY

CATL 宁德时代

比亚迪汽车

PICC 中国人民保险集团股份有限公司 THE PEOPLE'S INSURANCE COMPANY (GROUP) OF CHINA LIMITED

中国平安 PING AN

PROGRAMME CONTENT

Level 3 **: EV Battery Management System for Underwriter and Actuary**

Date : **13 - 16 October 2025 (4 days)**
Time : 9:00 am – 5:00 pm
Venue : China
Training Hour : 28 hours

Day	Topic Level 1	Topic Level 2	Topic Level 3	Mode	Hour
Day 3	2. Premiums and Underwriting Practices for Electric Vehicles Insurance	2.1 Calculation of Insurance Premiums for Electric Vehicles	2.1.1 Basic elements for premium calculation	In Class	1
			2.1.2 Calculation of Premiums for Main Insurance Types	In Class	2
		2.2 Underwriting Practices of the Insurer	2.2.1 The Obligations of Explanation and Notification for Insurers of Electric Vehicles	In Class	1
Day 4			2.2.2 Filling out and Entering the Insurance Application Form for Electric Vehicles	In Class	1
			2.2.3 Cancellation and modification of electric vehicle insurance contracts	In Class	1
			2.2.4 Terms of Value - added Services for Electric Vehicles Insurance	In Class	1
			2.2.5 Value - added Services for Electric Vehicles Insurance Customers	In Class	1
	Examination	Theory + Practical Operation Assessment			
In 1 mth	Q&A	Q&A Online (Chat Group)			

- End -

TARGET AUDIENCE

- Underwriter, actuary and product development team of insurance and reinsurance company.
- Professional who wants to pursue the knowledge and skills in this sector.

PROGRAMME FEE

	Aii Member	Non-Member
Registration Fee *(Closing Date: 11 Aug 2025)*	RM 15,000	RM 16,500
	USD 3,600	USD 3,960

The fee inclusive of :

- ✓ 3 levels of programme (Malaysia & China).
- ✓ All meals during Level 3 programme in China.
- ✓ Hotel accommodation and transportation in China.
- ✓ Including SST

ASSESSMENT STRUCTURE

Level	Format	Passing Rate	Grade
Level 1	100% Multiple Choice Questions	50%	Pass/Non-Pass
Level 2	100% Multiple Choice Questions	50%	Pass/Non-Pass
Level 3	100% Multiple Choice Questions	60%	Pass/Non-Pass

SPEAKER PROFILE

Li Gang

Key Trainer for Level 1, Level 2 & Level 3 (Malaysia & China)

Li Gang was the Team Leader of the EV Claim Innovation Department at PICC Finance Service Co., Ltd, where he has been instrumental in driving innovations and business development in the electric vehicle insurance sector since December 2019.

Li spearheads various EV innovation projects that utilize big data analysis for effective claim risk management. With a proven track record of achievements in 2023 and 2024, Li has made significant contributions to the field, including:

Development of Guidelines for Inspection and Damage Assessment: He established a seminar with the Insurance Association of China and leading battery manufacturers to publish comprehensive guidelines for inspecting and assessing damage to power batteries in EV insurance claims.

Flood Damage Assessment: Li led technical support initiatives for examining residual value and repair costs for flood-damaged EVs, resulting in improved efficiency and cost savings for PICC branches.

NEV Workshop Audit Guidelines: As the primary leader, he coordinated efforts with the China Certification & Accreditation Association to create guidelines that enhance service and capacity audits for EV workshops.

Training Initiatives: He collaborated with industry leaders to develop a robust EV training system, ensuring that industry professionals are updated on best practices and technical knowledge.

Online Diagnostic Models: Li has worked with BINEI to develop an online diagnostic model for damaged power batteries, offering innovative inspection services that improve customer support.

Anti-Fraud Research: Leveraging big data, he played a crucial role in developing an anti-fraud model for NEVs that utilizes advanced analytics to identify fraudulent claims.

With over 20 years of experience in the automotive and insurance industries, including significant roles at Volvo Truck Group Asia, Li brings a wealth of expertise to the EV programme. His leadership in innovation and commitment to enhancing industry standards positions him as a key player in shaping the future of EV insurance

ALIGNMENT TO THE FUTURE SKILLS FRAMEWORK

31 Prime Skills
15 Power Skills
Proficiency Level: Mastery

Skills Developed by Attending this Programme	
Prime Skills	
Customer Experience Management	1. Customer Experience Design 2. Customer Profiling
Digital & Data Integration	3. Big Data Analytics 4. Data Collection and Analytics 5. Predictive Modelling
Financial Products & Services	6. Demand & Supply Analysis 7. Pricing Strategy 8. Product Advisory 9. Product Design & Development 10. Product Performance Management 11. Quality Assurance 12. Underwriting Management
Growth & Partnerships	13. Continuous Improvement and Process Re-Engineering 14. Global Perspectives 15. Market Profiling 16. Scenario Planning & Analysis
Investments & Financial Management	17. Behavioural Finance 18. Financial Analysis & Modelling 19. Internal Control
Risk Management, Governance & Regulatory Compliance	20. Fraud Risk Management 21. Internal Governance 22. Operational Risk Management 23. Regulatory Compliance 24. Risk Governance 25. Risk Management
Sustainable Finance & Insurance	26. Sustainable Insurance and Reinsurance Solutions and Applications
Power Skills	
Innovation & Delivery	1. Adaptability and Resiliency 2. Business Acumen 3. Critical Thinking 4. Digital Fluency 5. Innovative Thinking 6. Learning Agility 7. Problem Solving 8. Sustainability Awareness

REGISTER NOW

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