



MSc Insurance and Sustainable Risk Management

AWARDED BY GLASGOW CALEDONIAN UNIVERSITY

STARTING 21 SEPTEMBER 2022

ONLINE-DISTANCE LEARNING

MODULES

QUALIFICATION

ADVANCED ENTRY FOR ADGIRM HOLDERS

1	Contemporary Issues in Management and Leadership in Insurance	➔	Graduate Certificate in Insurance and Sustainable Risk Management awarded by Glasgow Caledonian University
2	Underwriting and Claims Management	➔	
3	Insurance Automation, Digitalisation and Cyber Security	➔	Post Graduate Certificate in Insurance and Sustainable Risk Management awarded by Glasgow Caledonian University
4	Insurance Solutions for Risk in Emerging Markets	➔	
5	International Insurance Markets, Accounting and Regulations		Post Graduate Diploma in Insurance and Sustainable Risk Management awarded by Glasgow Caledonian University
6	Reinsurance, Risk Finance and Securitisation of Insurance Risk	➔	
7	Enterprise Risk Analysis and Modelling in Insurance		
8	Introduction to Research Methods*		MSc in Insurance and Sustainable Risk Management awarded by Glasgow Caledonian University
9	Research Project	➔	

SCI's Advanced Diploma in General Insurance and Risk Management (ADGIRM) holders are exempted from these two modules and can proceed to pursue Post Graduate Certificate in Insurance and Sustainable Risk Management awarded by the Glasgow Caledonian University.



*The module "Introduction to Research methods" cannot be taken until completion of the other seven modules above.

MINIMUM ACADEMIC REQUIREMENT

UK honours degree 2:2 (or equivalent) in a relevant subject, for example, risk management, insurance, banking, financial services, actuarial studies, business management, business administration, computing, natural disaster management, marketing, economics, finance, accounting, mathematics, health science, engineering, law or any other insurance and risk management-related subject.

PROGRAMME FEE

£850 per 15 credit module (total 120 credits) (inclusive of assessments)
 £1,700 for Research Project: (60 credits)
 Total £8,500 (for total 180 credits)

OPENING REGISTRATION DATE: **2 JANUARY 2022**

CLOSING REGISTRATION DATE: **31 JULY 2022**

[REGISTER](#)

PROFESSIONAL QUALIFICATIONS AND ADVANCED ENTRY

Singapore College of Insurance Advanced Diploma in Insurance and Risk Management can be accepted in lieu of a degree.

CREDIT TRANSFER

Singapore College of Insurance Advanced Diploma in General Insurance and Risk Management holders are eligible to apply for a total of 30 credits for the following 2 Modules:

Contemporary Issues in Management and Leadership in Insurance (15 credits)
Underwriting and Claims Management (15 credits)

MSc Insurance and Sustainable Risk Management



Insurance and Sustainable Risk Management is leading the way in shaping the future of the insurance industry. The Masters in Insurance and Sustainable Risk Management from GCU London gives students the skills that insurance professionals of the future will need.

The insurance industry is constantly changing. With advances in technology, an evolving risk landscape and a growing need for new insurance solutions in emerging markets, insurance professionals will be required to have different skill sets to be able to respond to these challenges.

How will we insure driverless cars? Smart houses or drones? Cyber insurance? How can micro-insurance help to close the insurance gap in emerging markets? The insurance and risk management masters degree provide you with the knowledge and skills needed to adapt to a changing risk landscape as well as current social, economic and political issues, within the context of insurance and risk management.

You will gain in-depth knowledge and understanding in underwriting and claims management, the core functions of the insurance profession. Choose the Masters in Insurance and Sustainable Risk Management and take the next step in developing

your technical and soft skills; identifying, forecasting and managing risk and discovering the importance and the thought-provoking nature of the insurance industry.

As a masters student at GCU London, you gain knowledge and develop skills on quantitative modelling and pricing insurance as well as developing leadership skills in managing insurance businesses.

Glasgow Caledonian University has over 30 years' experience in teaching Risk Management and this new masters degree programme expands that knowledge to further specialise in Insurance Management. You will learn from teaching staff who are industry experts with extensive insurance and risk management industry experience.

SCI is pleased to collaborate with the Glasgow Caledonian University in marketing this Masters Degree programme to our students.





For Whom

This course is appropriate for experienced insurance professionals who want to top up their career with an academic qualification, as well as recent graduates.

What You Will Study

The masters degree has been designed with a team of academics and industry professionals to combine the latest theoretical and practical insurance and risk management contents.

The MSc focuses on contemporary issues such as cyber risk insurance, emerging market risk, micro insurance, insurance for climate change, and Takaful (Islamic) Insurance.

The course will also teach you how to become an innovative leader and give you the soft skills necessary to run an insurance business of the future.

Upon completion of the degree course, you will have both theoretical and technical knowledge on advanced insurance topics ranging from underwriting and reinsurance to insurance regulations and accounting.



Module Information

The course is made up of eight 15-credit modules and a 15,000 words research project worth 60 credits.



CONTEMPORARY ISSUES IN MANAGEMENT AND LEADERSHIP IN INSURANCE (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to assist students in gaining a clear and consolidated understanding of how insurance companies are strategically managed. This includes an introduction to basic principles of management and an introduction to management styles. Students will also learn why management of insurance companies might differ from other industries, in particular in terms of regulatory requirements relating to corporate governance and separation of life and non-life operations. In addition, students will be able to understand why decision making under uncertainty might require different managerial skill sets. Furthermore, students will be able to discuss current and future challenges for insurers and its implications for the management of insurance companies, such as InsurTech, digitalisation, climate change and other issues.

LEARNING OUTCOMES

- Evaluate the operating models, structures and management of insurance organisations.
- Evaluate corporate governance requirements.
- Evaluate the Principles of Sustainable Insurance.
- Evaluate the benefits of effective decision making for insurance operations.
- Evaluate different perspectives on strategic management.
- Analyse how insurance operations make decisions in practice.
- Evaluate the current and future challenges to the management of insurance organisations.
- Evaluate the issues in Cross Border Merger and Accusations in Insurance.
- Evaluate how the technological innovations may shape the insurance industry in future and how decision makers strategically focus to capture the associated opportunities while avoiding risks.
- Evaluate the impact of climate change risk and the response by stakeholders for insurance business.

UNDERWRITING AND CLAIMS MANAGEMENT (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to provide the student with an in-depth knowledge of the underwriting and claims functions within an insurance company. This includes an understanding of what underwriting entails, how underwriting is organised and what pricing techniques are available to underwriters. In terms of the claims functions, students will learn how insurance companies organise claims handling and what regulatory requirements exist in respect of the prompt and fair handling of claims including the prompt settlement of claims. Furthermore, students will gain an understanding of an insurer's claims strategy and claims reserving principles, including actuarial techniques.

LEARNING OUTCOMES

- Evaluate the theory and principles of underwriting
- Analyse the principles and practices of insurance risk pricing
- Evaluate the technical aspects of underwriting portfolio management
- Evaluate applied underwriting techniques in business lines – personal and commercial
- Evaluate underwriting strategy, policy, practice and culture of ethics and professionalism
- Evaluate the claims management functions
- Evaluate the impact of regulations for claims functions
- Evaluate the corporate claims strategy, philosophy and culture of ethics and professionalism
- Evaluate the financial impact of the claims strategy to the organization
- Evaluate the principle of claims reserving



Module Information



INSURANCE AUTOMATION, DIGITALISATION AND CYBER SECURITY (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to provide both theoretical and practical foundation of insurance and cyber insurance. It deals with the process of digitalising insurance functions and operations. The impact of automation on insurance business are discussed in both opportunity and threat perspective. At a broader level the contents elaborately discuss how digitalisation of insurance business contributes to social welfare which is regarded as the core aim of the insurance business. The use of big data, application of artificial intelligence and blockchain technology in insurance underwriting and claims handling are discussed. In addition, the characteristics issues related to pricing cyber insurance products are covered. The capital charge of cyber risk for potential scenarios are also included in the contents.

LEARNING OUTCOMES

- Evaluate the evolution of ecommerce strategy and digitalisation of insurance business processes
- Understanding both theoretical and practical features of advanced analytics and deep machine learning in insurance
- Evaluate the role of big data on the human aspects of underwriting complex risks
- Evaluate the application of artificial intelligence in the field of digital transformation of insurance services and products
- Evaluate the insurance perspective of data protection regulations from an international context
- Evaluate the strategic risks arising from technological sophistication and developments
- Understand and evaluate the application, challenges and opportunities of blockchain technology in insurance
- Evaluate the characteristics and impact of cyber risk for insurance business
- Evaluate the insurance solutions for cyber risk and limitations to the insurability of these risks
- Evaluate the issues related to pricing cyber risk insurance products

INSURANCE SOLUTIONS FOR RISK IN EMERGING MARKETS (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to assist students in gaining a clear and consolidated view of the risks in the emerging markets (e.g., countries in South and east Asia, Latin America and the Caribbean, Central and Eastern Europe, Africa, the Middle East (excluding Israel), Central Asia, and Turkey). The theories, practices and solutions of emerging market risks (e.g., microinsurance, Takaful, etc.) are included in the contents of the module. The pricing of indexed based microinsurance products is discussed. The demand and supply as well as the regulatory issues on controlling and facilitating the progress of insurance protection in the emerging markets are included. The module focuses on the role and potential contribution of the insurance sector to achieve United Nation's 2030 Sustainable Development Goals.

LEARNING OUTCOMES

- Evaluate the risk landscape of emerging markets
- Evaluate the current insurance development and solutions in emerging market including availability and affordability of insurance (i.e., protection gap)
- Evaluate the microinsurance initiatives and its potential benefits and costs in underinsured markets
- Evaluate the insurability of risks in microinsurance markets
- Evaluate the regulatory issues of microinsurance in emerging markets
- Evaluate the issues, scope and pricing of index based insurance
- Evaluate the scope and pricing of agricultural (e.g., crop and livestock) insurance
- Evaluate the principles and practice of Takaful (Islamic) insurance
- Analyse the structure, demand and supply of Takaful insurance
- Evaluate the regulatory issues of Islamic insurance



Module Information

INTERNATIONAL INSURANCE MARKETS, ACCOUNTING AND REGULATIONS (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to assist students in gaining a clear and consolidated understanding of how insurance markets function and how these markets fit into the wider global economy. In addition, students will gain an understanding of how insurance is being regulated from a prudential and conduct perspective. This will include a more detailed analysis of some of the most important regulatory regimes, such as European Solvency II and/or the Chinese C-ROSS system. Furthermore, students will be provided with an overview of insurance law and how this influences product design. Accounting for insurance companies and insurance products and why and how this differs from general corporate accounting rules are discussed. The students will gain technical skill relevant to analysing general (non-life) insurers' financial statements. Lastly, the aspects of both mandatory and voluntary financial and non-financial (e.g., ESG factors) disclosures (or reporting) for insurance companies are added in the module contents.

LEARNING OUTCOMES

- Evaluate the theory of insurance market regulations
- Evaluate insurance market economics and structure (oligopoly, monopoly, perfect market competition, etc.)
- Prudential regulation structure vis-a-vis market conduct
- Evaluate distribution channels and consumer centric regulatory structure
- Evaluate cross border and international regulatory, supervisory and legal issues
- Analyse IASB (International Accounting Standards Board) and IAIS (International Association of Insurance Supervisors) and initiatives in respect of the harmonisation of insurance regulations
- Impact of solvency regulation on insurers risk capital and asset allocation
- Understand the application of international law and accounting practices to insurance markets
- Evaluating Insurance Companies Financial Statements, Fair Value Accounting and Disclosures
- Evaluate Insurance laws and regulations relevant to design insurance contracts

REINSURANCE, RISK FINANCING AND SECURITISATION OF INSURANCE RISK (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to assist students in gaining a comprehensive understanding of how reinsurance functions as a risk transfer tool for insurance companies. This includes an evaluation of the various types of reinsurance contracts and how reinsurance can influence underwriting capacity and capital management. Furthermore, students will learn about non-traditional forms of risk transfer, such as catastrophe bonds, sidecars, collateralised reinsurance and industry loss warrants. Students will also be able to understand how these non-traditional forms of risk transfer influence the pricing and capacity in the traditional reinsurance markets. Lastly, students will gain an understanding of pricing techniques, accounting treatment of reinsurance and regulatory issues pertinent to reinsurance as well as other risk transfer instruments.

LEARNING OUTCOMES

- Evaluate the principles and types of reinsurance
- Evaluate the application of reinsurance to different business lines
- Evaluate reinsurance underwriting and programme design
- Understand Reinsurance Technical Accounting
- Understand non-traditional forms of risk transfer (e.g. ILS [Insurance Linked Securities] (e.g., catastrophe bonds), collateralised reinsurance, ILWs)
- Understand the use of ILS products for capital and risk management
- Understand the theoretical foundation and evaluate the pricing of reinsurance and alternative risk transfer contracts
- Evaluate Contingent Risk Financing and Integrated Risk Solutions
- Understand and design risk securitisation solutions for climate risk
- Evaluate the operational, legal and regulatory issues relating to reinsurance

Module ■ Information

ENTERPRISE RISK ANALYSIS AND MODELLING IN INSURANCE (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to assist students in gaining knowledge and skill in measuring and modelling insurance risks. Although a range of topics from several modules of this programme will be covered, the main focus is the process of pricing general insurance risk (i.e., ratemaking) using actuarial techniques from an enterprise-wise (i.e., portfolio optimisation) perspective. The contents will also cover the measurement of insurance risk, simulation and analysis of results and reporting for efficient and effective decision making (e.g., capital charge and allocation). A core element of this module is the use of EXCEL spreadsheets to solve case-studies using real world data. This is used to encourage the development of analytical skills and serves as a useful practical exercise for those who may want to pursue a career in risk analysis and modelling in the insurance sector.

LEARNING OUTCOMES

- Understand the pricing process of insurance risk
- Understand pricing techniques – Burning Cost Analysis
- Design frequency modelling: adjusting for claim count IBNR
- Design severity modelling: adjusting for IBNER and other factors and selecting and calibrating a severity model
- Understand capital consideration, design capital allocation, and understand risk measures in pricing
- Understand and apply experience rating for non-proportional reinsurance
- Understand and design exposure rating for property insurance
- Understand and design catastrophe risk modelling
- Understand the theoretical perspective of pricing – credibility theory, generalised linear modelling, utility theory, Extreme Value Theory
- Understand and structure the optimisation model for insurance portfolios

INTRODUCTION TO RESEARCH METHODS (15 CREDITS)

ABOUT THE MODULE

The aim of this module is to provide students with an introduction to a range of research approaches to critical inquiry, relevant to their field of study. The module will introduce students to knowledge and skills on how to: formulate research questions, plan a research project, collect data, analyse data and write a research report.

Students will learn how to compare and contrast different research paradigms, to enable them to choose appropriate methodologies and methods in order to address a particular research question. They will also consider related practical ethical and philosophical issues when developing and conducting research.

LEARNING OUTCOMES

- Critically assess research gaps and generate aims and objectives applicable for an appropriate research project relevant to field of study
- Design a research project to answer a particular research question
- Evaluate and apply appropriate research methodologies and methods
- Synthesise a range of information
- Demonstrate the ability to plan, execute and present a research project

The module "Introduction to Research methods" cannot be taken until completion of all other 15 credit modules above.



Module Information

RESEARCH PROJECT (60 CREDITS)

ABOUT THE MODULE

The aim of this module is to enable students to develop an understanding and obtain practical experience of the research process and research skills required to undertake a supervised independent research project. Students are expected to demonstrate the ability to conduct advanced research, which is based on a wide and extensive critical review of the literature relevant to their field of study.

Before the student commences their research project, they must develop an assessed research proposal for their intended project, with guidance from their academic supervisor.

During the research process and in co-operation with their supervisor, students are required to demonstrate critical awareness of practice in their applied field, relevant theories, research techniques and approaches. They must demonstrate methodological and analytical rigour supported by well-constructed argument and debate. Both the proposal and project elements of the module offer students the opportunity to apply course concepts, theories and techniques, draw on internationally published literature and good practice, and develop and interpret knowledge about practice in their area of study. The research project can assume related issue and focuses upon topics covered in the student's programme of study. The research project can assume one of 3 forms: An applied Research Project, an Inquiry Project or a Consultancy project.

The applied Research Project involves collection of either primary data or combination of primary and secondary data. The Inquiry Project is secondary data based and can assume the form of an exploration of an aspect of the development of global trends in the relevant business literature and an assessment of its implications for local practice. The Consultancy Project is normally primary data based and requires the student to adopt the role of a consultant with a relevant organization. Students intending to choose this option are required to secure an agreement in principal, from a client organization prior to the finalization of the first piece of coursework.

Regardless of the nature of the output selected, the project is required to be theoretically robust and methodologically sound to meet the academic requirements of the module. Equivalence in the assessment of all three projects is maintained.

LEARNING OUTCOMES

- Critically assess research gaps and generate aims and objectives applicable for an appropriate research project relevant to field of study
- Demonstrate a systematic and critical understanding of relevant theory pertaining to the chosen topic.
- Design a research project to answer a particular research question.
- Demonstrate the use of appropriate methodological framework to meet the aim and objectives of the project.
- Synthesise a range of information.
- Conduct empirical research.
- Present an intellectually robust and evidence-based analysis and develop appropriate recommendations

Programme Schedule

TRIMESTER A MODULES (SEP TO DEC 2022)

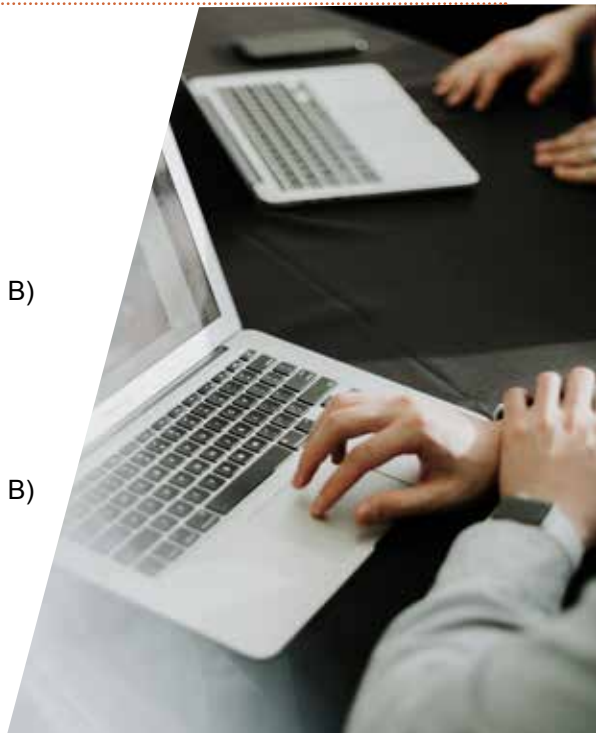
- Contemporary Issues in Management and Leadership in Insurance
- Underwriting and Claims Management
- Insurance Automation, Digitalisation and Cyber Security
- International Insurance Markets, Accounting & Regulations
- Introduction to Research Methods [offered in both Trimesters A and B]

TRIMESTER B MODULES (JAN TO APR 2023)

- Insurance Solutions for Risk in Emerging Markets
- Reinsurance, Risk Financing and Securitisation of Insurance Risk
- Enterprise Risk Analysis & Modelling in Insurance
- Introduction to Research Methods [offered in both Trimesters A and B]

TRIMESTER C MODULE (2023)

- Research Project [60 credits]



Assessments

Module	Coursework (CW) Loadings, Type and Word Limits	
1 Contemporary Issues in Management and Leadership in Insurance	CW1 (50%): <ul style="list-style-type: none"> • PowerPoint presentation • Scenario based written report • Individual Submission for both on-campus and distance learning students 	CW2 (50%): <ul style="list-style-type: none"> • Written critical essay • Individual submission for both on-campus and distance learning students
2 Underwriting and Claims Management	CW1 (30%): <ul style="list-style-type: none"> • PowerPoint presentation • Individual submission for both on-campus and distance learning students 	CW2 (70%): <ul style="list-style-type: none"> • Analytical Report • Individual submission for both on-campus and distance learning students
3 Insurance Automation, Digitalisation and Cyber Security	CW1 (30%) <ul style="list-style-type: none"> • 2 hours MCQ type online Class Test • Individual submission both on campus and distance learning students 	CW2 (70%) <ul style="list-style-type: none"> • 3,000 words of written analytical report • Individual submission for both on-campus and distance learning students
4 Insurance Solutions for Risk in Emerging Markets	CW1 (60%) <ul style="list-style-type: none"> • Analytical case study. 3,500 words Group submission for on-campus students • 2,000 words individual submission for distance learning students 	CW2 (40%) <ul style="list-style-type: none"> • 2,000 words of written critical essay • Individual submission for both on-campus and distance learning students
5 International Insurance Markets, Accounting and Regulations	CW1 (40%) <ul style="list-style-type: none"> • 1,500 words of written report on a problem • Individual submission for both on-campus and distance learning students 	CW2 (60%) <ul style="list-style-type: none"> • 3,000 words of written analytical report • Individual submission for both on-campus and distance learning students
6 Reinsurance, Risk Finance and Securitisation of Insurance Risk	CW1 (30%) <ul style="list-style-type: none"> • 2 hours MCQ type Online Case Test • Individual submission for both on campus and distance learning students 	CW2 (70%) <ul style="list-style-type: none"> • 3,000 words analytical report on a selected topic or/and exercises • Individual submission for both on-campus and distance learning students

Assessments

Module	Coursework (CW) Loadings, Type and Word Limits	
7 Enterprise Risk Analysis and Modelling in Insurance	CW1 (40%) <ul style="list-style-type: none"> 2,000 words report/briefing document solving scenario based computational problem(s) or exercise(s) using computer packages (e.g., EXCEL) Risk Modelling software Individual submission for both on-campus and distance learning students 	CW2 (60%) <ul style="list-style-type: none"> 2,500 words analytical report on given exercise(s) or problem(s) Individual submission for both on-campus and distance learning students
8 Introduction to Research Methods	CW1 (40%) <ul style="list-style-type: none"> Research proposal presentation Individual submission for both on-campus and distance learning students 	CW2 (60%) <ul style="list-style-type: none"> 2,000 words research report Individual submission for both on-campus and distance learning students
9 Research Project	CW1 (20%) <ul style="list-style-type: none"> 1,500 words research proposal Individual submission for both on-campus and distance learning students 	CW2 (80%) <ul style="list-style-type: none"> 15,000 words research project Individual submission for both on-campus and distance learning students





**Singapore College
of Insurance**

About Singapore College of Insurance

The Singapore College of Insurance (SCI) is a not-for-profit professional training and education body set up in 1974, as part of Singapore's efforts to develop as a financial hub.

For more than 48 years, SCI has remained focused in its efforts to upgrade the technical expertise of insurance and financial services practitioners, and to provide them with professional advancement opportunities, through its series of practice-oriented programmes and internationally-accredited qualifications. Since the late 1970s, the SCI has also played the role of an industry examination body to conduct regulatory examinations for those wishing to join the financial advisory, life and general insurance industries.



About Glasgow Caledonian University

GCU London is a postgraduate campus of Glasgow Caledonian University - one of the largest universities in Scotland with 20,000 students. As one of the top modern universities in the UK, GCU provides high-quality teaching, learning and research. GCU is the pioneer of risk and insurance education in the UK. Our students benefit from the University's worldwide profile, state-of-the-art laboratories and a number of renowned centres of excellence. With world-class research and market-leading courses, GCU provides a stimulating, vibrant and accessible learning environment and has international students from more than 100 different countries in the heart of Glasgow city centre.

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Singapore College of Insurance Limited
CPE Registration No.: 199408491M
Period of CPE Registration:
From 26 September 2019 to 25 September 2023

Information presented on this marketing material is correct at the time of publishing. However, changes to the programme contents, dates, time, duration, venue, faculty members and assessments can occur owing to unforeseen circumstances. Every effort will be made to inform all participants of such changes on a timely basis.

Updated 8: 25 March 2022