GI 301 – Further Topics in General Insurance

Nov 2025/Mar 2026/Jul 2026

Important Course Information:

Exam Registration	Candidates may register online or with an application.
Order Study Notes	Study notes are part of the required syllabus and are not available electronically but may be purchased through the online store.
Syllabus Resources	Resources listed in this syllabus may include study notes, online readings, textbooks, videos and module content. Candidates are responsible for all materials in their entirety, including sections such as Appendices, unless it is stated otherwise in the syllabus.
Topic Weight Ranges	These have been provided to indicate the relative emphasis on each topic. The ranges of weights shown are intended to apply broadly over multiple sittings; however, the weights of topics on any individual exam could fall outside the published range. Candidates should also recognize that some questions will cover multiple learning objectives.
Learning Outcomes	Each resource listed indicates the specific learning outcome(s) it aligns with under that particular topic. Resources are listed in the recommended order of study to best master the overall topic and learning objective. For additional guidance, please see the course strategy guide.
Introductory Study Note	The Introductory Study Note has a complete listing of all study notes as well as errata and other important information.
Case Study	A case study will not be provided for this examination.
Past Exams	Past Exams from Fall 2020-present are available on SOA website.
Updates	Candidates should be sure to check for updates on the course homepage periodically for additional corrections or notices to the current syllabus.

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1. Topic: STOCHASTIC RESERVING (15% - 25%)

Learning Objectives

The candidate will understand how to use stochastic loss development models to estimate reserve variability.

Learning Outcomes

The Candidate will be able to:

a) Identify the assumptions underlying the chain ladder estimation method.

b) Test for the validity of these assumptions.

c) Identify alternative models that should be considered depending on the results of the tests.

d) Estimate the standard deviation of a chain ladder estimator of unpaid claims.

e) Apply a parametric model of loss development.

f) Estimate the standard deviation of a parametric estimator of unpaid claims.

g) Assess whether a fitted model is acceptable given the data being modeled.

Resources	Learning Outcomes
Outstanding Claims Reserves, Version 1.3a, SOA, 2022 (sections 3 through 5, excluding section 4.3)	*1a-d*
Considerations Regarding the Chain Ladder Model, SOA, May 2025	*1a-d*
Stochastic Loss Reserving Using Generalized Linear Models, Taylor, G., and McGuire, G., 2016, CAS Monograph Series Number 3, Casualty Actuarial Society • Ch. 5: The Bootstrap (section 5.3, pp. 47-53) • Ch. 6: Model Validation (excluding section 6.4)	*1b-d*
LDF Curve Fitting and Stochastic Reserving: A Maximum Likelihood Approach, Clark, D.R., Casualty Actuarial Society Forum, Fall 2003, Casualty Actuarial Society This article may be accessed at www.casact.org through the following navigation: • Publications & Research • Browse research -> [Author Last Name = Clark, Year Published = 2003] -> Search • Result: LDF Curve-Fitting and Stochastic Reserving: A Maximum Likelihood Approach	*1e-g*

2. Topic: DEVELOPMENT ANALYSIS FOR EXCESS LIMITS AND LAYERS (5% - 10%)	
Learning Objectives	
The candidate will understand the considerations in the development of losses for excess limits and layers.	
Learning Outcomes	
The Candidate will be able to: a) Estimate ultimate claims for excess limits and layers. b) Understand the differences in development patterns and trends for excess limits and layers.	
Resources	**Learning Outcomes**
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022 • Appendix G: Development Analysis for Excess Limits and Layers	*2a, 2b*

3. Topic: PREMIUM LIABILITIES (0% - 5%)	
Learning Objectives	
The candidate will understand the procedure for estimating premium liabilities.	
Learning Outcomes	
The Candidate will be able to: a) Understand the purpose of general insurance premium liabilities. b) Calculate the premium liabilities for a general insurance company.	
Resources	**Learning Outcomes**
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022 • Ch. 25: Premium Liabilities • Appendix A: Dentist Insurer (only section A.3.6) • Appendix D: ABC Manufacturing Company/ABCMC Captive (only section D.6)	*3a, 3b*

4. Topic: RISK MARGINS FOR UNPAID CLAIMS (5% - 10%)

Learning Objectives

The candidate will understand the considerations in selecting a risk margin for unpaid claims.

Learning Outcomes

The Candidate will be able to:

a) Describe a risk margin analysis framework.

b) Identify the sources of uncertainty underlying an estimate of unpaid claims.

c) Describe methods to assess this uncertainty.

Resources	Learning Outcomes
A Framework for Assessing Risk Margins, Marshall, K., Collings, S., Hodson, M., and O'Dowd, C., Institute of Actuaries of Australia 16th General Insurance Seminar, Nov. 2008	*4a-c*

5. Topic: MONITORING RESULTS (0% - 10%)	
Learning Objectives	
The candidate will understand the methods to monitor actual versus expected experience.	
Learning Outcomes	
The Candidate will be able to: a) Identify and describe approaches for monitoring results. b) Prepare a comparison of actual to expected claims.	
Resources	**Learning Outcomes**
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022 • Ch. 37: Monitoring Results • Appendix E: Public Entity Self-Insurance Pool (only sections E.3.1 and E.3.2)	*5a, 5b*

6. Topic: SPECIALIZED RATEMAKING TOPICS (25% - 35%)

Learning Objectives

The candidate will understand and be able to apply ratemaking techniques for the following situations: classification ratemaking, deductible options, increased limit options, claims-made policies and individual risk rating.

Learning Outcomes

The Candidate will be able to:

a) Understand and apply classification ratemaking methods.

b) Explain the issues and considerations regarding classification ratemaking.

c) Price for deductible options and increased limits.

d) Develop rates for claims-made contracts.

e) Understand and apply techniques for individual risk rating.

f) Estimate the premium asset for retrospectively rated policies.

Resources	Learning Outcomes
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022 • Ch. 33: Basic Risk Classification	*6a, 6b*
Classification Ratemaking, Minimum Bias and GLMs, SOA, May 2025	*6a*
Actuarial Standards of Practice, No. 12, Risk Classification (for All Practice Areas), Actuarial Standards Board of the American Academy of Actuaries, Last Revised 2011 (excluding Appendix 2)	*6b*
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022	
• Ch. 34: Actuarial Pricing for Deductibles and Increased Limits	*6c*
• Appendix D: ABC Manufacturing Company/ABCMC Captive (only section D.4)	*6c*
• Appendix E: Public Entity Self-Insurance Pool (only sections E.3.4 and E.3.5)	*6c*
• Ch. 35: Claims-Made Ratemaking	*6d*
• Ch. 36: Individual Risk Rating and Funding Allocation for Self-Insurers (excluding section 36.7)	*6e*
Estimating the Premium Asset on Retrospectively Rated Policies, Teng, M. and Perkins, M., Casualty Actuarial Society, 1996 Proceedings, Vol. LXXXIII (pp. 611-647, excluding section 5) This article may be accessed at www.casact.org through the following navigation: • Publications & Research • Browse research -> [Author Last Name = Teng, Year Published = 1996] -> Search • Result: Estimating the Premium Asset on Retrospectively Rated Policies	*6f*

7. Topic: REINSURANCE (15% - 20%)

Learning Objectives

The candidate will understand the fundamentals of reinsurance and demonstrate knowledge of reinsurance reserving, the fundamental techniques of reinsurance pricing and risk transfer testing of reinsurance contracts.

Learning Outcomes

The Candidate will be able to:

a) Understand the types of reinsurance and key reinsurance terms.

b) Explain the principal functions of reinsurance.

c) Analyze and describe the various types of reinsurance.

d) Understand the issues encountered when applying loss development methods to reinsurance.

e) Calculate the price of a reinsurance contract.

f) Apply an aggregate distribution model to a reinsurance pricing scenario.

g) Describe considerations involved in pricing property catastrophe covers.

h) Understand the application of a reinstatement premium.

i) Test for risk transfer in reinsurance contracts.

Resources	Learning Outcomes
Fundamentals of General Insurance Actuarial Analysis, J. Friedland, 2nd Edition, 2022 • Ch. 10: A Reinsurance Primer Including: Errata for Chapter 10 of Fundamentals of General Insurance Actuarial Analysis	*7a-c*
General Insurance: Considerations in Reinsurance Reserving, SOA, May 2025	*7d*
Basics of Reinsurance Pricing, Clark, D.R., Actuarial Study Note, 2014	*7e-h*
Risk Transfer Testing of Reinsurance Contracts, Brehm, P. and Ruhm, D., Variance, 2007, Volume 01, Issue 01 (sections 2 through 5, pp. 11-17, begin with first complete paragraph on page 11), Casualty Actuarial Society This article may be accessed at www.casact.org through the following navigation: • Publications & Research • Browse research -> [Author Last Name = Brehm, Year Published = 2007] -> Search • Result: Risk Transfer Testing of Reinsurance Contracts	*7i*
Insurance Risk Transfer and Categorization of Reinsurance Contracts, Gurenko, E., Itigin, A. and Wiechert, R., World Bank Policy Research Working Paper No. 6299, 2012 (Introduction, and sections I through III)	*7i*
Risk Transfer Practice Note, Developed by the Committee on Property and Liability Financial Reporting of the American Academy of Actuaries, 2022, (sections 4 and 5)	*7i*

8. Topic: CATASTROPHE MODELS AND RISK LOADS (5% - 10%)

Learning Objectives

The candidate will understand catastrophe modeling output and the allocation of catastrophe risk loads among accounts.

Learning Outcomes

The Candidate will be able to:

a) Understand the purpose and development of catastrophe models.

b) Understand the type of output produced by catastrophe models.

c) Understand how catastrophe model output can be used in actuarial tasks.

d) Allocate a property catastrophe risk load among different accounts.

Resources	Learning Outcomes
Uses of Catastrophe Model Output, American Academy of Actuaries Extreme Events and Property Lines Committee, July 2018 (excluding Appendices)	*8a-c*
An Overview of Catastrophe Modeling Output, SOA, May 2025	*8b, 8c*
An Application of Game Theory: Property Catastrophe Risk Load, Mango, D.F., PCAS LXXXV, 1998, Casualty Actuarial Society This article may be accessed at www.casact.org through the following navigation: • Publications & Research • Browse research -> [Author Last Name = Mango, Year Published = 1998] -> Search • Result: An Application of Game Theory: Property Catastrophe Risk Load	*8d*