

Course 2A Life Insurance Syllabus

This course provides the student with the basics needed to operate in the Australian life insurance. Once a good grounding is established, the course progresses to covering the risks that confront operating companies and specifically focuses on the special risks that affect life companies and the main methods of managing these risks. The course then moves into the first part of the control cycle for a life insurance company and takes the student through the analysis of experience, setting of assumptions and then on into using these assumptions to price products.

These notes are structured around major areas of learning which are called Units. Within each Unit there are Key Performance Objectives which describe what the student should know. Within each Key Performance Objective there are a number of Learning Objectives which describe how the student should be able to demonstrate their knowledge.

The Key Performance Objectives of each unit along with the corresponding learning objectives are provided below. The numbering convention used is

Unit Performance. Key Performance Objective. Learning Objective. Therefore:-

- 1 means Unit 1. Unit descriptions are in **black bold**
- 1.1 means Unit 1, Key Performance Objective 1. Please note however that Key Performance Objectives are sequential in number and are not restarted at 1 when the unit number changes. Descriptions of Key Performance Objectives are in **blue bold**
- 1.1.1 means Unit 1, Performance Objective 1, Learning Objective 1. Descriptions of Learning Objectives are in plain text.

When you see it in the notes it will look like this: -

Item	Unit/Key Performance Objective/Learning Objective
1	Means Unit 1. Unit descriptions are in black bold
1.1	Means Unit 1, Key Performance Objective 1. Please note however that Key Performance Objectives are sequential in number and are not restarted at 1 when the unit number changes. Descriptions of Key Performance Objectives are in blue bold.
1.1.1	Means Unit 1, Performance Objective 1, Learning Objective 1. Descriptions of Learning Objectives are in plain text.

Item	Unit/Key Performance Objective/Learning Objective
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The full course syllabus is shown below:

- 1 General Economic and Commercial Environment**
- 1.1 Analyse the significant components and trends within the Australian life insurance and funds management markets.**
 - 1.1.1 Describe the types of life insurance and funds management products sold in Australia. Explain how each type of product meets customer needs and fits into the wider financial services market
 - 1.1.2 Identify significant trends in the Australian life insurance and funds management markets and evaluate the implications for industry participants
- 1.2 Examine the functions of life insurer/funds management businesses and consider how these relate to the advice provided by an actuary.**
 - 1.2.1 Compare and contrast the range of organisational structures associated with Australian life insurers/funds managers both horizontally (e.g. life insurer, unit trust manager) and vertically (e.g. asset managers, service companies)
 - 1.2.2 Describe the administration practices of these organisational structures and the implications of their application
 - 1.2.3 Examine how benefits are calculated for traditional (participating and non-participating), unit linked and funds management products and evaluate how this impacts product pricing, administration and customers
 - 1.2.4 Compare the various methods used by life insurers and fund managers to acquire new business
 - 1.2.5 Identify the range of options for remunerating sales forces/distribution channels and evaluate the implications of each
 - 1.2.6 Outline the various roles of the actuary in organisations
- 1.3 Describe the legislative environment in Australia and consider how this relates to the issues an actuary is expected to address.**
 - 1.3.1 Explain the key requirements of the Life Insurance Act 1995 as they affect actuarial practice
 - 1.3.2 Describe other relevant legislation and its application to actuarial practice, including Corporations Law, the Trade Practices Act, Mergers and Acquisitions Act, Managed Investments Act, Financial Services Reform Act, Disability Discrimination Act, Stronger Super and the Future of Financial Advice (FOFA)
 - 1.3.3 Outline the role of the regulators (ASIC, APRA, ACCC) and consider the implications for the role of the actuary

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1.3.4	Outline the principles of how tax for individuals and life insurance and funds management companies is determined and determine the allowance for the impact of tax in product design and pricing assumptions for life insurance and funds management products
2	Risk Management Issues and Tools
2.4	Assess the various methods used to identify and manage risk.
2.4.1	Describe the risk management framework used to identify and manage risk for life insurance and funds management companies
2.4.2	Classify these risks into heterogeneous groups for analysis (e.g. credit, market and investment risk, liquidity risk, insurance risk, operational risk etc.)
2.4.3	Assess the interrelationship of certain risks, particularly lapse, sales volume and expense
2.5	Assess the various methods used to manage insurance risk, including underwriting and reinsurance.
2.5.1	Identify the information required when assessing an individual risk
2.5.2	Appraise the objectives of both financial and medical underwriting
2.5.3	Identify the information required to assess group insurance risk and describe the process adopted for quoting for a group scheme.
2.5.4	Identify and differentiate the products that pose special insurance risks
2.5.5	Evaluate the relative merits of underwriting and claims management in mitigating insurance risk
2.5.6	Explain why reinsurance is undertaken and evaluate the methods used in Australia
2.6	Analyse and manage asset risk and asset/liability risk.
2.6.1	Identify and differentiate products that pose special asset/liability issues and risks
2.6.2	Categorise asset risks into market, liquidity, credit and mismatch risks and design mitigation strategies
2.6.3	Develop and justify an asset mix that relates to the requirements of the liability profile
2.6.4	Explain the issues surrounding investment guarantees and develop strategies to manage the guarantee risk
2.6.5	Recognise and know how to value the true costs of options and guarantees in traditional business, unitised business, embedded options and derivatives
2.7	Analyse and manage the operational risks associated with running a life insurance or funds management company

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2.7.1	Analyse the operational risks that may affect the value of liabilities/assets in absolute terms as well as those risks affecting the relative value of assets to liabilities
2.7.2	Analyse risks that may affect the ability of suppliers to supply goods and services
2.7.3	Analyse the non-financial risks a company faces, including reputation and legal risk
2.7.4	Develop strategies to monitor, mitigate or control the risks identified
2.7.5	Decide how to manage unit pricing errors and develop strategies to minimise the risk of unit pricing errors occurring
3	Monitoring Experience and Determining Assumptions
3.8	Demonstrate the ability to monitor the experience of a life insurance or funds management company and use the results to determine and evaluate assumptions.
3.8.1	Identify when and why experience investigations may be undertaken
3.8.2	Develop and produce the various types of experience investigations needed to determine assumptions
3.8.3	Use the results of the experience investigations to determine and evaluate the assumptions required to model future expected policy experience
3.9	Use a range of other investigations to supplement the results of experience investigations to determine and evaluate assumptions for modelling the business.
3.9.1	Analyse the various types of discontinuances with reference to industry experience, and decide and evaluate assumptions based on this analysis
3.9.2	Analyse the range of mortality and morbidity bases, including population, insured lives, group life, annuitant and options experience, and determine and evaluate assumptions based on this analysis
3.9.3	Evaluate new business assumptions
3.9.4	Determine and evaluate assumptions for calculating claims reserves
3.9.5	Describe the special characteristics of decrement experience and examine the implications for assumptions
3.10	Determine and evaluate expense assumptions for a life insurance business.
3.10.1	Construct a typical expense analysis and explain how the results can be used
3.10.2	Perform an analysis of the expenses and interpret the variations in the results
3.10.3	Examine the influences that impact on expenses and describe how this can be used to determine and evaluate expense assumptions
3.11	Determine the assumptions for economic factors in life insurance valuations.

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3.11.1	Formulate methods to calculate investment rates of return
3.11.2	Examine and describe the interaction between the risk free rate of return and the risk premium
3.11.3	Design and describe a coherent set of investment assumptions
3.11.4	Examine and explain the influence of economic assumptions upon expenses
3.11.5	Identify and discuss the consequences of asymmetric return distributions
3.11.6	Formulate methods to determine discount rates, tax rates, the effect of franking credits, credit default allowances, inflation and replicating portfolios
4	Product Development and Profit Testing
4.12	Design a typical product development process.
4.12.1	Examine and apply the methods used by organisations to identify and meet the needs of their clients
4.12.2	Apply the various steps involved in product development
4.12.3	Identify and discuss the main issues involved in product development
4.12.4	Compare, contrast and apply the methods used to determine pricing (historical and modern techniques, as well as detailed and top-down techniques)
4.12.5	Appropriately and successfully use selected application techniques and methodologies to determine the central risk premium and its variability (mean, variance and percentile confidence level) including the use of stochastic modelling
4.13	Examine the role of the valuation basis and surrender values in pricing.
4.13.1	Explain how the valuation basis and the capital requirements affect the pricing basis
4.13.2	Consider the issues resulting from this circular relationship
4.13.3	Determine an appropriate surrender value basis for pricing
4.14	Apply profit-testing techniques to life insurance and investment portfolios.
4.14.1	Plan a profit-testing exercise and compare and discuss the potential profit measures
4.14.2	Define the terms capital efficiency, return on capital, return on equity, return on assets and return on embedded value and evaluate their relevance for life insurance business
4.14.3	Deduce the rating requirements for specific classes of business.
4.14.4	Determine an appropriate basis for the assumed profit distribution to policyholders and shareholders

Item	Unit/Key Performance Objective/Learning Objective
4.14.5	Apply profit testing techniques to both risk and investment products and contrast the results
4.14.6	Determine the pricing terms and conditions for conventional and investment linked business