COURSE DETAILS
Course Code: F71LB
Full Course Title: Life Insurance 2
SCQF Level: 11
SCAF Credits: 15
Available as Elective: No

DELIVERY LEVEL
Undergraduate: Yes
Postgraduate Taught: Yes
Postgraduate Research: No
Additional Information:

COURSE AIMS
The aims of this module are:

• To introduce the principles of actuarial planning and control within insurance companies

To apply this knowledge and understanding to practical situations in life insurance

LEARNING OUTCOMES – SUBJECT MASTERY
On completion of this course the student should be able to:

• Describe the role and responsibility of the actuary within insurance management
• Describe the key features of the environment in which life insurance companies operate
• Demonstrate a thorough knowledge of life insurance products which insurance companies manage
• Describe the factors which contribute to the pricing and design of new products
• Demonstrate an understanding of the management and administration of products through their lifecycle, including reserving
• Describe the principal sources of profit within the insurance industry
• Determine surplus and to perform an analysis of the surplus
• Identify risks and suggest ways of implementing effective risk management

Understand challenges / opportunities that the industry faces e.g. Solvency II

LEARNING OUTCOMES – PERSONAL ABILITIES
F71LB Life Insurance 2

- Show an appreciation of the interface between academic theory and industrial practice
- Demonstrate the ability to learn independently and as part of a group
- Manage time, work to deadlines and prioritise workloads
- Present results in a way that demonstrates that they have understood the technical and broader issues of the life insurance environment

Show an appreciation of the various potential conflicts within the insurance environment

**SYLLABUS**

### Models

- Describing the use of actuarial models (including stochastic models) for decision making in life insurance companies

### Investment guarantees and options

- Describing the uses of models and option pricing techniques to values investment guarantees
- Describing the conventional and North American methods of valuing mortality options, and performing calculations using these methods

### Reinsurance

- Describing the uses of reinsurance in risk management
- Describing the main types of reinsurance and their uses

### Underwriting

- Describing the uses of underwriting in risk management
- Describing the main types of underwriting
- Describing the sources of information used when carrying out underwriting
• Actuarial Funding
  • Describing techniques of taking credit upfront for future loadings in premiums/charges in respect of initial expenses

Unit Pricing
  • Describing the principles of unit pricing for internal unit-linked funds

Surrenders and alterations
  • Describing methods of determining discontinuance and alteration terms for without profit contracts
  • Calculating surrender values for without profit contracts

Product design
  • Describing principles of determining a suitable design for a life insurance product

Reserving
  • Describing the principles for setting supervisory reserves
  • Describing the ways in which assumptions for setting reserves differ from those of pricing

Setting assumptions for different purposes
  • Describing purposes of insurance company valuations, including embedded value
  • Describing appropriate assumptions for each purpose

Risk discount rate
Describing how the risk discount rate may be set for pricing/embedded value calculation purposes

Monitoring experience

Describe how and why the experience of a life insurance company should be monitored

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