F71LB Life Insurance 2

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
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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