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

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**
F71LB Life Insurance 2

- 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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**COURSE RELATIONSHIPS**

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<thead>
<tr>
<th>Course Code</th>
<th>Level</th>
<th>Title</th>
<th>School</th>
<th>Type</th>
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<tbody>
<tr>
<td>F71LA</td>
<td>11</td>
<td>Life Insurance 1</td>
<td>School of Math and Comp Sci.</td>
<td>Assessed</td>
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**LOCATION AND ASSESSMENT METHODS**

| Edi | SBC  | Ork | Dub | Malay | IDL | COLL | ALP | OTH | Method | Weight | Exam Mins | Type       | Diet       | Semester | F71LA |
|-----|------|-----|-----|-------|-----|------|-----|-----|--------|--------|-----------|------------|------------|-----------|
| Y   | Y    |     |     |       |     |      |     |     | Examination | 80     | 180       | Assessment |           | 2         |          |
| Y   | Y    |     |     |       |     |      |     |     | Coursework   | 20     |           | Assessment |           | 2         | F71LA     |
| Y   | Y    |     |     |       |     |      |     |     | Examination | 100    | 180       | Reassessment|           | 2         |          |