

**DEREE COLLEGE SYLLABUS FOR:**

**EC 4737 INSURANCE INDUSTRY DYNAMICS – LEVEL 6**

**UK CREDITS: 15**

(Updated Fall 2010)

**PREREQUISITES:** EC 1000 Principles of Microeconomics  
MA 1108 College Algebra  
MA 2010 Statistics I  
MA 3111 Statistics II  
EC 3324 Insurance  
EC 4435 Insurance Issues and Reporting  
EC 4638 Actuarial Science

**CATALOGUE  
DESCRIPTION:**

Key issues in modern insurance, ranging from the factors that determine life and health insurance consumption to insurance company solvency and asset-liability management (ALM). Particular attention is paid to the problems of social security systems nowadays (including the Greek one), and to the role private insurance can play in this context.

**RATIONALE:**

As a final step towards enabling students to acquire a manager's and economist's perspective of the insurance industry, this course encourages them to think critically about and evaluate current insurance industry issues, ranging from life & health insurance and capital market innovation to ALM, social security, and climate change.

**LEARNING OUTCOMES:** As a result of taking this course, the student will be able to

1. Analyse the key issues of mortality protection and of the global private medical insurance industry;
2. Demonstrate detailed knowledge of the nature of unit-linked products and describe their pricing;
3. Analyse the main systems of social security, the problems they face, and the possible role of private insurance in this context;
4. Demonstrate understanding of the problems of the Greek social security system;
5. Define, and show knowledge of basic methods of, asset-liability management (ALM) in an insurance company;
6. Demonstrate knowledge of how insurers create value for shareholders.
7. Demonstrate understanding of basic insurance company rating, and of the challenges posed by climate change to insurers.

**METHOD OF TEACHING  
AND LEARNING:**

In congruence with the learning and teaching strategy of the college, the following tools are used:

- Classes consist of lectures and class discussions of recent articles in economic journals assigned by the instructor.

- Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions and go over lecture material.
- Use of a blackboard site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

**ASSESSMENT:**

In-class, 1-hour, "diagnostic" test - <b>formative</b>	0	problems/essay questions combination (choice: 3 out of 5)
In-class midterm examination (1-hour) - <b>summative</b>	40	problems/essay questions combination (choice: 3 out of 5)
Final examination (2-hour, comprehensive) - <b>summative</b>	60	problems/essay questions combination (choice: 4 out of 6)

The formative test aims to prepare students for the final examination.  
 The midterm examination tests Learning Outcomes 1, 2, 3, 4.  
 The final examination tests Learning Outcomes 1-7.

**READING LIST:**

**(A) Textbook(s):**

(1) Glaser, K. L. (2010): *Inside the Insurance Industry* (lulu.com). 108 pages. ISBN-13: 978-0557300297.

**(B) Other:**

The following reports from Sigma, a Swiss Re publication, unless otherwise stated, which can be downloaded from:  
[http://www.swissre.com/pws/research/%20publications/sigma%20ins.%20research/sigma%20archive/sigma\\_archive\\_english.html](http://www.swissre.com/pws/research/%20publications/sigma%20ins.%20research/sigma%20archive/sigma_archive_english.html)

**On life and health insurance:**

*Mortality protection: the core of life.* Sigma (Swiss Re), no. 4/2004.

*To your health: diagnosing the state of healthcare and the global private medical insurance industry.* Sigma (Swiss Re), no. 6/2007.

*Life and health insurance markets benefit from reforms in state pension and health systems.* Sigma (Swiss Re), no. 6/1998.

*Innovative ways of financing retirement.* Sigma (Swiss Re), no. 4/2008.

**Unit-linked insurance, capital market innovation, risks, ratings:**

*Pricing and profitability of unit-linked insurance.* Munich Re (2000). In [http://www.munichre.com/publications/302-02741\\_en.pdf](http://www.munichre.com/publications/302-02741_en.pdf)

*Unit-linked life insurance in W. Europe: regaining momentum?* Sigma (Swiss Re), no. 3/2003.

*Capital market innovation in the insurance industry.* Sigma (Swiss Re), no. 3/2001.

Centre for the Study of Financial Innovation & PriceWaterhouseCoopers (2009): *Insurance Banana Skins 2009: The CSFI survey of the risks facing insurers.*

*Insurance company ratings.* Sigma (Swiss Re), no. 4/2003

**On social security:**

*Financial difficulties of public pension schemes: market potential for life insurers.* Sigma (Swiss Re), no. 8/1998.

*Public vs private provision of pensions.* DESA (UN Dept of Economic & Social Affairs) discussion paper no. 1 (1998). In <http://www.un.org/esa/desa/papers/1998/esa98dp1.pdf>

*The truth about pension reform,* by N. Barr, in *Finance & Development* (Sept. 2001, vol. 38, no. 3). In <http://www.imf.org/external/pubs/ft/fandd/2001/09/barr.htm>

*OECD public pension programmes in crisis: An evaluation of the reform options,* by R. Disney (1999). In <http://www.worldbank.org/pensions>

*Macroeconomic implications of demographic developments in the euro area,* by A. Maddaloni et al., European Central Bank, Occasional Paper Series, no. 51, August 2006. In <http://www.ecb.int/pub/pdf/scpops/ecbocp51.pdf>

**On solvency, ALM, insurance economics:**

*Solvency of non-life insurers: balancing security and profitability expectations.* Sigma (Swiss Re), no. 1/2000.

*Asset-liability management for insurers.* Sigma (Swiss Re), no. 6/2000.

*The economics of insurance: how insurers create value for shareholders.* Swiss Re (2001).

**On insurance and climate change:**

Mills, E. (2009): "A Global Review of Insurance Industry Responses to Climate Change", in *The Geneva Papers* 34, 323-359.

**WWW RESOURCES:**

1. <http://www.munichre.com/>
2. <http://www.swissre.com/>
3. <http://eae.gr/web/>
4. <http://www.cii.co.uk/cii.aspx>
5. [http://ec.europa.eu/internal\\_market/insurance/solvency/index\\_en.htm#sol1](http://ec.europa.eu/internal_market/insurance/solvency/index_en.htm#sol1)
6. <http://www.abi.org.uk/Bookshop/Archive.asp>

**SOFTWARE  
REQUIREMENTS:**

Excel and Word.

**INDICATIVE CONTENT:**

1. What drives the markets for life and health insurance?
2. Unit-linked products; issues of pricing and profitability.
3. Capital market innovation in insurance industry.
4. Public vs private pension schemes.
5. Social security systems in crisis; proposed reforms; opportunities for private insurers.
6. The Greek social security system.
7. Macroeconomic implications of demographic developments in euro area.
8. Insurance company solvency.
9. Asset-liability management in insurance.
10. How insurers create value for shareholders.
11. Insurers and climate change.
12. Insurance company rating.