The Hashemite University	
Faculty of Economics and Business Administrative	
Offering Department	Banking and Financial Sciences
Module title / number	Principles of Actuarial Science, 110204360
Teaching staff	Dr. Wasfi Al Salamat
Office location	316- Economic Faculty
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Office hours	Sunday, Tuesday, Thursday: 12-1
Pre-requisite	110205105 & 110108103
Course description	This course provides an introduction to actuarial studies and the role of actuaries. It covers the basic principles underling the actuarial analysis and insurance management, superannuation and other financial contracts including introductory probability, statistics, financial mathematics. It introduces the role that actuaries play in the design and pricing of products and in risk management in the field of life insurance, general insurance and superannuation, banking and investment.
Aim and course objectives	The main aim of this course is to provide an introduction to actuarial studies and the methods used by actuaries to quantify and value long term risk. It will cover the basics of probability, financial mathematics and actuarial mathematics along with some of their actuarial applications.
Intended learning outcomes (ILOs) Upon the completion of this module , students should be able to achieve the following:	
1- knowledge and understanding	
	1) Explain the actuarial principles underlying risk management for financial security system. 2) Outline the main products and techneques of actuarial analysis in life insurance, non-life insurance, retirement, social security, health insurance and aged care.
2- Analytical and thinking skills	
	Students should have the ability to 1) Explain and apply the basic principles of profitability to straightforward applications in actuarial studies. 2) Explain and apply the basic principles of life tables and survival models. 3) Explain and apply the basic compound interest to straightforward problems in actuarial studies. 4) Explain and apply the basic principles underlying risk quantification and assessment. 5) Quantify expected cash flow and profit for basic insurance product.
Teaching and learning methods	
	There will be 3-hour lectures per week. Although the lectures cover the vast majority of the module material, students must use of the textbooks extensively especially the empirical cases presented in the book.
Assessment methods	
Students will be assessed based on the following:	

Exam	Day/Date	Time	Place	Weight
First Exam				25%
Second Exam				25%
Participation	Every lecture			10%
Final Exam	To be assigned by the registrar office			40%

Academic Honesty

All the assignments and work submitted by the student should be his/her own. All actions of academic dishonesty including cheating, plagiarism or helping other students in such actions will be dealt with strictly according to the university regulations.

Main textbook(s) and additional readings

Sherris, M. (2010). Principles of Actuarial Science, Cengage Publishing.

Detailed lecture schedule

Material:

Chapter 1: Introduction
Chapter 2: Games of Chance
Chapter 4: High Finance
Chapter 5: Economics of Risk
Chapter 6: Actuarial Management and Accounting
Chapter 7: Risk Management and Financial Security Systems
Chapter 8: Life Insurance
Chapter 9: Property and Casualty Insurance

Good Luck