The University of Jordan

Accreditation & Quality Assurance Center

COURSE Syllabus

1	Course title	Essentials of Actuarial Sciences
2	Course number	5203343
3	Credit hours *(theory)*	3 hours
	Contact hours *(theory, practical)*	
4	Prerequisites/corequisites	Principals of Insurance
5	Program title	Risk Management and Insurance
6	Program code	03
7	Awarding institution	The University of Jordan \Aqaba branch
8	Faculty	Management and Finance
9	Department	Risk Management and Insurance
10	Level of course	3
11	Year of study and semester (s)	
12	Final Qualification	B.A.
13	Other department (s) involved in teaching the course	None
14	Language of Instruction	English
15	Date of production/revision	Revised Yearly

16. Course Coordinator:

Coordinator name, office numbers, office hours, contact information, etc.

17. Other instructors:

Office numbers, office hours, phone numbers, and email addresses should be listed.

18. Course Description:

This course aims to clarify basic of probabilities, actuarial models and the application of those models to insurance and other financial risks.
After that discuss a basis for evaluating the use of probabilistic models and facility in using probabilistic models to develop business solution.

19. Course aims and outcomes:

A- *Aims:*
1. To equip the student with the principles he or she needs to be aware of the practical problems facing the Jordanian Insurance institution in selling and buying Insurance contract.
2. Make the student able to discuss fundamental of actuarial models in insurance institutions.
3. Make the student able to calculate some models in actuarial studies.
4. Understand the main types of insurance contracts and how to calculate it.
5. Develop and strengthen overall analytical skills.
B- Intended Learning Outcomes (ILOs): *Upon successful completion of this course students will be able to …*
1- knowledge and understanding
A1) Understand the fundamental principles of actuarial models.
A2) Explain the main types of insurance' contracts.
A3) Students should be able to discuss the actuarial models in insurance institutions.
A4) understand the reports that result from insurance contract.
C- Analytical and thinking skills: *Students should have the ability to*
B1) Analyse the contract and make the appropriate decision.
B2) Use appropriate tools such as Excel sheets to calculate premium.
B3) The ability to relate mathematical and statistical models to their assumptions and to the real world.

20. Topic Outline and Schedule:

Topic	Week	Instructor	Achieved ILOs	Evaluation Methods	Reference
CH.1: Elements of Probability	Week 1		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.2: Discrete Random Variable	Week 2-3		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.3: Continuous Random Variables	Week 4-5		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.4: Multivariate Distributions	Week 6-7		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.5: Financial Mathematic	Week 8-9		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.6: Mortality	Week 10-11		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.7: Life Insurances contracts	Week 12-13		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.8: Premiums	Week 14		A&B	Lectures, HW, Quizzes, Short exams	Main textbook
CH.9: Reserves	Week 15		A&B	Lectures, HW, Quizzes, Short exams	Main textbook

21. Teaching Methods and Assignments:

Development of ILOs is promoted through the following <u>teaching and learning methods</u>: - There will be 3 hours lectures per week. Although the lectures cover the vast majority of the module material, students must make use of the textbooks extensively especially the empirical cases presented in the book.

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22. Evaluation Methods and Course Requirements:

Opportunities to demonstrate achievement of the ILOs are provided through the following <u>*assessment methods and requirements*</u>*:*

Students will be assessed based on the following:

Exam	Day/Date	Time	Place	Weight
Quizzes, H.W, Short exams, projects, presentations, etc.			Class room	30%
Mid- exam			Class room	30%
Final Exam	TBD	TBA		40%

23. Course Policies:

A- Attendance policies:

You should attendant all classes during the semester. It allows absenting just 15% in this semester.

B- Absences from exams and handing in assignments on time:

It will not be accepted to apologize if you absent from the exams or be late in assignment date.

C- Health and safety procedures:

If you sick, you can visit our clinic in the university then bring a doctor's prescription with you in a class.

D- Honesty policy regarding cheating, plagiarism, misbehavior:

All the assignments and work submitted by the student should be his or 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.

E- Grading policy:

F- Available university services that support achievement in the course:

You can use the library and Internet Lab.

24. Required equipment:

- you should bring your calculator during the classes

25. References:

A- Required book (s), assigned reading and audio-visuals:

     1- Main Textbook: Promislw S. D.,(2012). Fundamental of Actuarial Mathematics. 6th Edition

B- Recommended books, materials, and media:

     2- Matthew J.Hassett & Donald G. stewart, (2006). Probability For Risk Management, 6th Edition.
     3- Stephen P. Shao & Lawrence P. Shao, (2006). Mathematics For Management and Finance.
     4- A.K. Gupta & T.Verga (2002). An Introduction to Actuarial Mathematics.
     5- Notes during lectures.

26. Additional information:

Name of Course Coordinator: -------- -----------Signature: ------------------------ Date: ------------------------

Head of curriculum committee/Department: ------------------------ Signature: --------------------------------

Head of Department: ------------------------ Signature: --------------------------------

Head of curriculum committee/Faculty: ------------------------ Signature: --------------------------------

Dean: -- -Signature: --------------------------------

<u>Copy to:</u>
Head of Department
Assistant Dean for Quality Assurance
Course File