

ST. JOHN'S UNIVERSITY
NEW YORK

THE PETER J. TOBIN COLLEGE OF BUSINESS

Department of Risk Management, Insurance & Actuarial Science

SYLLABUS

Course title: Life Contingencies (I)
Course number: ACT 3335

Submitted: Fall 2014
Dr. Ping Wang

DEPARTMENT

Risk Management, Insurance & Actuarial Science

COURSE NAME

Life Contingencies (I)

COURSE NUMBER

ACT 3335

COURSE DESCRIPTION

An introduction to life contingencies which deals with valuation of cash flows predicated upon death or survivorship. A detailed presentation of survival models is followed by applications to determine actuarial present value of insurance benefits and annuity benefits. Details of premium computations are also introduced.

PREREQUISITE

ACT 3333 and ACT 3334

CREDIT

3 credit hours

OBJECTIVES OF THIS COURSE

An understanding of the principles of Life Contingencies is fundamental to the education of an actuary. This course, along with ACT 4336 (Life Contingencies II) will prepare the students for the MLC exam of the Society of Actuaries.

TOPICAL MODULES

- I. Basics of life insurance (1 week)
- II. Survival models (3-4 weeks)
 - i. Survival models
 - ii. Life tables and selection
- III. Insurance benefits (3-4 weeks)
 - i. Death-benefit products

ii. Annuities

IV. Premium calculation (3-4 weeks)

METHODS OF INSTRUCTION

Lectures, discussions, and exercises.

SUGGESTED STUDENT PERFORMANCE EVALUATION

ASSESSMENT

Student performance will be assessed on homework, quizzes, midterm exams and final cumulative exam.

All examinations and quizzes are closed book and closed notes. SOA-approved electronic calculators may be used in all exams and quizzes.

TEXT BOOK

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| Title | Actuarial Mathematics for Life Contingent Risks |
| Authors | Dickson, David C.M., M.R. Hardy and H.R. Waters |
| Publisher | Cambridge University Press |
| Date | 2012, 2 nd edition |