



ACTUARIAL SCIENCE 427 "LIFE CONTINGENCIES II"

Calendar Description: H(3-1T)

Benefit premiums, premium principles, fully continuous and fully discrete premiums.
Benefit reserves, various reserve factors, analysis of benefit reserves. Multiple life
functions, dependent and independent models, related annuities and insurances.

Prerequisite: Mathematics 323 and 353 and Actuarial Science 327.

Text: "Actuarial Mathematics," Bowers, Gerber, Hickman, Jones, Nesbitt, second edition,
Society of Actuaries, 1997.

Syllabus

Topics

Chapter 6 (6.1-6.4): Benefit Premiums

Chapter 7 (7.1-7.6): Benefit Reserves

Chapter 8 (8.1-8.4): Analysis of Benefit Reserves

Chapter 9 (9.1-9.5, 9.6.1, 9.7, and 9.9): Multiple Life Functions

Time permitting, additional material from Chapters 6-9 and 15 (see below) may be included:

Chapter 15 (15.1-15.2.1, 15.4, 15.6-15.6.1): Insurance Models Including Expenses

It is intended that this course should cover a portion of the syllabus for that part of the professional actuarial examination concerned with Life Contingencies. Currently, this corresponds to most of the material listed above from Chapters 6-9 and 15 that is on the syllabus for the Society of Actuaries Exam M, Life Contingencies Segment (MLC). This course syllabus should be updated as needed, with this objective in mind.

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