BEPP 452/STAT 452. BEPP 852/STAT 852
Fundamentals of Actuarial Science II
Spring 2015

Textbook: Dickson, Hardy, Waters: Actuarial Mathematics for Life Contingent Risks (Bookstore)

Course pack: Same as BEPP / STAT 451

Office hours: Temporarily: by appointment and e-mail
Tuesdays, Thursdays, 3:00-5:00, 458 JMHH

Note: If you hit “Reply” on an e-mail from me to the class, you are replying to the whole class.

Lesson 1: Dickson chapter 5: Basic annuities
Jan 15
Lesson 2: Dickson chapter 5: Annuities payable m times per year
Jan 20
Lesson 3: Dickson chapter 5: Calculation of annuity functions
Jan 22
Lesson 4: Dickson chapter 6: Net future loss: means and variances
Jan 27
Lesson 5: Dickson chapter 6: Past exam questions
Jan 29
Lesson 6: Dickson chapter 6: Gross annual premiums
Feb 3
Lesson 7: Dickson chapter 6: Profit; extra risks
Feb 5
Lesson 8: Dickson chapter 7: Policy values; examples
Feb 10
Lesson 9: Dickson chapter 7: Prospective and retrospective reserves
Feb 12
Lesson 10: Dickson chapter 7: Recursive formulas, discrete policies
Feb 17
Lesson 11: Dickson chapter 7: Recursive formulas, examples
Feb 19
Lesson 12: Dickson chapter 7: Asset shares
Feb 24
Lesson 13: Dickson chapter 7: Fractional durations; non-forfeiture laws.
Feb 26
Lesson 14: Dickson chapter 7: Modified premium reserves
Homework due: B6-2, B6-4, B6-5, B7-1, B7-6, B7-9, B7-10
Lesson 15: Dickson chapter 8: Joint-life and last-survivor benefits
Mar 5
Lesson 16: Dickson chapter 8: Two-life policies: examples
Mar 17
Lesson 17: Dickson chapter 8: Two-life policies: exam questions
Mar 19 End of mid-term material
Lesson 18: Dickson chapter 8: Dependent probabilities
Mar 24 Homework due: B9-19, B9-20, B9-21, B9-22
Lesson 19: Dickson chapter 8: Independent probabilities
Mar 26 Mid-term exam. You can have in class: your class notes, the textbook, and an
Lesson 20: Dickson chapter 8: Exam questions
Mar 30
Lesson 21: Dickson chapter 8: Exam questions
Apr 2
Lesson 22: Dickson chapter 9: Introduction to pension plans
Apr 7
Lesson 23: Dickson chapter 9: Present value of employee benefits
Apr 9
Lesson 24: Dickson chapter 9: Funding plans
Apr 14
Lesson 25: Dickson chapter 9: Setting the Defined Contribution
Apr 16
Lesson 26: Examples: The practice of pension plans
Apr 21 Homework due: B10-10, B11-16, B11-18, B11-19
Lesson 27: Open
Apr 23
Lesson 28: Open
Apr 26

Solutions to exam questions since 2000: www.soa.org, click: Education, Exams and
Requirements, ASA, Exam MLC, Past Exams and Solutions; find the exam session and click
solution.

Take-home project

Final grade: 45% mid-term
40% take-home project
15% assigned problems