

Course Syllabus for STA 4183 Theory of Interest

Fall 2011, Section 6395

Class: MWF in Little Hall room 101

Time: 3rd Period, 9:35 - 10:25AM

Course Website: <http://www.stat.ufl.edu/~rrandles/sta4183/index.html>

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Office Hours: 7th and 8th periods Tuesday and Thursday

Prerequisite: MAC 2312 (or equivalent)

This course is an introduction to the fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows. Specific topics to be covered include: measurement of simple and compound interest, accumulated and present value, annuities, yield rates, amortization schedules, sinking funds, bonds, securities and related funds. It also includes material on derivatives.

The course STA 4183 is designed to provide the necessary background for the second actuarial exam (SOA FM or CAS #2). The course STA 4321 provides the necessary background for the first actuarial exam (SOA P or CAS #1). The courses STA 4210 and STA 4322 provide a partial background for other exams (SOA MLC or CAS #3L) and (SOA C or CAS #4) actuarial exams.

Required Textbook: "The Theory of Interest" 3rd Edition, by Stephen G. Kellison (2009) McGraw-Hill.

Recommended Textbook: "Derivatives Markets" 2nd Edition, by Robert L. McDonald (2006) Addison Wesley.

Course Coverage:

Kellison - Chapter 1 (1.1-1.10), Chapter 2 (2.1-2.6), Chapter 3 (3.1-3.8), Chapter 4 (4.1-4.9), Chapter 5 (5.1-5.6), Chapter 6 (6.1-6.7, 6.10), Chapter 7 (7.1-7.7), Chapter 9 (9.4), Chapter 10 (10.1-10.5), Chapter 11 (11.1-11.8)

McDonald - Chapter 1 (1.1-1.4), Chapter 2 (2.1-2.6, App.2.A), Chapter 3 (3.1-3.5), Chapter 4 (4.1-4.4), Chapter 5 (5.1-5.4, App. 5.B), Chapter 8 (8.1-8.2)

Assignments: Exercises will be assigned every class period and will be available on the class website. Selected additional exercises will be collected at set dates announced in advance. Assigned exercises are good examples of the types of questions that will appear on exams.

Calculators: The following Texas Instruments calculators may be used during exams: BA-35, BA II Plus, BA II Plus Professional, TI-30Xa, TI-30X II or TI-30XS Multiview. No other calculators may be used. Each student is responsible for having their own individual calculator in operational condition for exams.

Course Exams: There will be four exams given during the regular class period on the following dates:

Wednesday, September 14 Friday, October 07
Wednesday, November 02 Wednesday, December 07

Grading: The relatively few collected exercises will be graded with a maximum score of 10 for each problem. The sum of your exercise scores will be divided by the total number of exercise scores possible and that fraction will be applied to 40 points. So the maximum number of points on exercises will be 40 points. Each of the four exams will have a maximum point total of 100 points. So the maximum point total for the course will be 440 points. There will be no final exam in this course.

Grading Scale:

Course grade boundaries will be no higher than,

A = 440 – 407 A– = 406 – 396 B+ = 395 – 385 B = 384 – 363 B– = 362 – 352
C+ = 351 – 330 C = 329 – 308 C– = 307 – 297 D = 296 – 258 E = 257 – 0

Actuarial Science Minor:

For more information on the actuarial science minor at the University of Florida and the Florida Actuarial Student Society see (<http://www.stat.ufl.edu/academics/ugrad/ActuarialScience/index.htm>). Professor Randles is the academic advisor for all undergraduate statistics majors, statistics minors and actuarial science minors.

ABOUT THE DEPARTMENT OF STATISTICS:

The Department of Statistics at the University of Florida is one of the nation's leading statistics departments. The Department awards approximately 17 Bachelors degrees, 14 Masters degrees, and 8 Ph.D. degrees per year. The Statistics Department, chaired by Professor Michael Daniels, has a faculty of 20 members whose research interests include both theoretical and applied statistics. We welcome inquiries about our programs. The Statistics Department's main office is 102 Griffin-Floyd Hall (telephone 392-1941).