

Course Syllabus for STA 4183 Theory of Interest Fall 2016, Section 1A61

Class: McCarty B Hall - Room G086

Times: Tuesdays 7th Period, 1:55PM - 2:45PM and Thursdays 7th and 8th Periods, 1:55PM - 3:50PM

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

Instructor: Ronald H. Randles

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Office Hours: 3:00PM - 4:00PM Tuesdays and 4:00PM - 5:00PM Thursdays

TA: David Lindberg

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Office Hours: 10:30-11:30AM Mondays and Fridays, 2:00-4:00PM Wednesdays

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 the mathematical foundations of derivative financial instruments.

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" 3rd Edition, by Robert L. McDonald (2013) Pearson.

Printed Course Lecture Notes for STA 4183: are available from Target Copy, 1412 West University Avenue at a cost of \$15.36.

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 (3.1-3.4), Chapter 4 (4.1-4.4), Chapter 5 (5.1-5.4, App. 5.B), Chapter 8 (8.1-8.3)

Assignments: Exercises will be assigned every class period and these assignments will be available on the class website. Selected additional exercises will be assigned one week in advance and collected on dates (Sept 1, Sept 29, Oct 27, Nov 22). Assignments are due in the class period designated in the assignment. LATE PAPERS WILL NOT BE ACCEPTED. 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. NO PROGRAMMABLE CALCULATORS OR CELL PHONES OR SMART WATCHES MAY BE USED OR VISIBLE DURING EXAMS!

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

Tuesday, September 13 Tuesday, October 11
Tuesday, November 8 Tuesday, December 06

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. Quizzes will be given on dates (Sept 1, Sept 22, Oct 4, Oct 20, Nov 1, Nov 17). Quizzes emphasize the focal point issues and formulas (notation) covered in class since the previous quiz or exam. Each quiz has a maximum score of 10. The sum of your four best quiz scores will comprise your course quiz score. So the maximum number of quiz points possible will be 40 points. THERE WILL BE NO MAKE-UP QUIZZES GIVEN FOR ANY REASON. Each of the four exams will have a maximum point total of 100 points. So the maximum point total for the course will be 480 points. There will be no final exam in this course.

Grading Scale:

Course grade boundaries will be no higher than,

A= 480 -442 A-= 441 -432 B+= 431 - 420 B= 419 - 396 B-= 395 - 384
C+ = 383 — 360 C= 359 - 324 C-= 323 - 312 D= 311 - 275 E= 274 - 0

Actuarial Science Classes:

This class STA 4183 is required for the actuarial science minor. It can also be used as an elective class for the statistics major or minor, but only if your catalog year is earlier than fall 2015.

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>). Dr Demetris Athienitis (Office 116B, Griffin-Floyd Hall) 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 Brett Presneli, has a faculty of 15 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).