COURSE SYLLABUS

Course Information

ADVANCED ACTUARIAL APPLICATIONS

FALL 2016 **ACTS 6306**

Section	Call No	Course Meeting Times	Class Room	Instructor
6306.001	87592	MW 8:30 AM – 9:45 AM	CB3 1.312	Koshevnik

Professor **Contact Information** **Dr. Yuly Koshevnik**
Room: FA 2.408 **Phone: 972-883-4178** **Email: yuly.koshevnik@utdallas.edu**

Hours: M W 4:00 – 5:00 PM, T R 7:00 – 8:00 PM F 12 – 2 PM

Course Pre-requisites, Co-requisites, and/or Other Restrictions
MATH 2451, MIS 3300, or consent of instructor.

Course Description – See Below
This class covers parts of CAS Exam 4 / SOA Exam C.
Instructor consent required

Student Learning Objectives/Outcomes
The purpose of this 3-hour course is to help actuarial students prepare for the CAS Exam 5 by providing necessary understanding of probabilistic and statistical concepts in credibility studies. Attention will be focused on the Bayesian methodology and empirical Bayes approach to credibility. The bootstrap methods will conclude the course.
Instructor consent required.

Required Textbooks and Materials

1. S. Broverman: ACTEX C Study Manual: Volume II, recent edition.

Textbook, lecture notes, calculator, and scratch paper should be brought to each class period.

IMPORTANT DATES & HOLIDAYS	
CLASSES START	AUGUST 22
LABOR DAY	SEPTEMBER 5
CENSUS DAY/ DROP WITHOUT A "W"	WEDNESDAY, SEPTEMBER 7
DROP (APPROVAL REQUIRED)	SEPTEMBER 8 – OCTOBER 27
DROP WITH WL	OCTOBER 4 – OCTOBER 27
INTERMEDIATE EXAM 1	OCTOBER 12
INTERMEDIATE EXAM 2	NOVEMBER 14
THANKSGIVING AND FALL BREAK	NOVEMBER 23 – 28
LAST DAY OF CLASSES	DECEMBER 7
FINAL EXAM	TBA

Grading Policy and Scale

Your course grade will be determined based on the following weighting:
Homework Assignments (**weekly, collected in class only**) **20%** (two lowest scores dropped)
Three **in class** Exams (**see schedule**) **25% + 25% + 30% = 80%**
No on-line homework submission and no make-up exam.

Grading: Scale	[98, 100]	[93, 97]	[90, 93)	[85, 89]	[80, 84]	[75, 79]	[70, 74]	[65, 69]	[60, 64]	[0, 59]
	A+	A	A -	B+	B	B -	C+	C	C -	F

Course & Instructor Policies

Homework: Homework will be assigned, collected in class, graded, and returned in class. No online submission, please! SIGN and STAPLE your work!!!

Exams: **Two** major **intermediate exams** and **comprehensive final exam** will be given as scheduled.

Calculator: Due to a large number of problems relying on specific financial keys, an SOA approved exam calculator may be required. For additional information please visit:
http://www.soa.org/education/exam-req/exam-day-info/edu-calculators.aspx

TENTATIVE COURSE OUTLINE		
No.	Topic	Dates
1	Limited Fluctuation Credibility	Aug 22 – 31
2	Bayesian Estimation: Discrete Prior	Sep 7 – 14
3	Bayesian Credibility: Discrete Prior – Further Developments	Sep 19 – 28
4	Bayesian Credibility: Continuous Prior	Oct 3 – 5
	Intermediate Exam I [Topics 1 – 4]	Oct 12
5	Bayesian Credibility: Common Probability Models	Oct 17 – 24
6	Buhlmann Credibility	Oct 26 – 31
7	Empirical Bayes Credibility Methods	Nov 2 – 7
	Intermediate Exam II	Nov 14
8	Simulation: The Inversion Method	Nov 16
	Thanksgiving and Fall Break	Nov 21 – 26
9	The Bootstrap Methodology	Nov 28 – Dec 7
	Course Overview	Dec 7
	Final Exam	TBA

These descriptions and timelines are subject to change at the discretion of the Professor.

Common policies can be seen from http://provost.utdallas.edu/syllabus-policies/