

This 6 1/2-day intensive seminar split over two weekends will be taught by Abe Weishaus (6 ½ days) and Bonnie Averbach (1/2 day of the MLC material). Abe Weishaus' study manual(s) will be sent in advance of the seminar. Students attending only one portion (either MLC, 3L or MFE/3F) of the seminar will receive the manual related to the material they are attending.

Students may attend the entire seminar, covering Exam MLC or 3L and MFE/3F or just attend one portion.

Exam MLC and 3L dates: Sept. 7, 8, 9, 21, 22 (Sept. 22 ends at 1PM) (4 1/2-day split seminar)

Exam MFE dates: Sept. 23, 24 (2-day split seminar)

Entire Seminar: Sept. 7, 8, 9, 21, 22 (Sept. 22 ends at 1PM), 23, 24 (6 1/2-day split seminar)

Abraham Weishaus, F.S.A, M.A.A.A, CFA, abe_weishaus@glic.com, holds a B.A. in Mathematics from Yeshiva University and an M.S. and Ph.D. in Mathematics from New York University. He has spent almost his entire career at Guardian Life as a financial reporting actuary. Much of his job consists of modeling and projecting business results.

Abe has been teaching weekly exam preparation classes since 1985. He taught the pre-2000 syllabus SOA Course 130 (Operations Research), SOA Course 160 (Survival Models), and CAS Part 4B (Loss Models and Credibility Theory) for the Actuarial Society of Greater New York. After 2000, he taught Course 4 (Actuarial Modeling), and continues to do so for St. Johns University. He also taught parts of the CAMAR seminars for Courses 3 and 4 for several years.

He was on the SOA Individual Life & Annuity exam committee from 1987–1997.

He has also written popular study guides for Courses MLC, 3L, MFE/3F, and C/4. Students taking his seminar receive the guides for the course(s) they register for.

Bonnie Averbach, A.S.A., bonnie.averbach@temple.edu is an Associate Professor of Risk Management and Actuarial Science and Director of the Program in Actuarial Science at Temple University. She has given intensive review classes for many years on the topics of Probability, Interest Theory, and Life Contingencies. She is an author/co-author of the texts *Mathematics: Problem Solving Through Recreational Mathematics*, *Applied Finite Mathematics*, and *Mathematics with Applications for the Management, Life, and Social Sciences*, as well as a co-author of preparation manuals for actuarial examinations P/1, FM/2 and MLC.

Syllabus:

All days are 8:30–5:00 unless otherwise indicated. 3L students may leave during discussion of *italicized* topics.

Sept. 7 (MLC/3L)

Morning

Survival distributions: Probabilities, force of mortality, moments, percentiles, recursive calculations, interpolation within ages (uniform, *exponential & hyperbolic*), *select mortality*.

Insurances: Moments of insurances payable at the moment of death (continuous).

Afternoon

Insurances: Moments of insurances payable at the end of the year (discrete), percentiles, recursive calculations. *Going between discrete and continuous insurances.*

Annuities: Moments, percentiles, recursive calculations, *m-thly payments.*

Sept. 8 (MLC/3L)

Morning

Premiums: Discrete and continuous, percentile of loss at issue, variance of loss at issue, *true fractional premiums.*

Afternoon

Reserves: Prospective formula, retrospective formula, other formulas, variance of loss, recursions, *accounting loss and other advanced topics.*

Sept. 9 (MLC/3L)

Morning

Multiple lives: Probabilities, force of mortality, moments, insurances, annuities, *contingent survival functions, common shock.*

Afternoon

Multiple decrements: Probabilities, force of decrement, *associated single decrement tables*, insurances and annuities (simple and *complex*).

Sept. 21 (MLC/3L)

Morning

For MLC students: Expenses

For 3L students: Statistics (8:00–1:00)

Afternoon (2:00–5:00)

Poisson processes: Probabilities, Interevent times, thinning, sums and mixtures, compound processes.

Sept. 22 (MLC/3L)

Morning (8:30–1:00)

Markov chains: Probabilities, premiums and reserves.
Overall review of MLC/3 material.

Sept. 23 (MFE/3F)

Morning

Put-call parity, binomial trees

Afternoon

Black-Scholes formula, delta hedging

Sept. 24 (MFE/3F)

Morning

Exotic options, Brownian motion

Afternoon

Interest rate models, overall review of MFE/3F material.

