

Math 454 - Spring 2025 - Homework 09

Published: Wednesday, March 12, 2025

Status - Reading Assignments:

Here are the reading assignments to be completed before the first one of this HW.

SCF2 (Shreve – Stoch. Calculus for Finance, II Textbook):

Ch. 1 – 4

MF454 lecture notes:

Ch.2 – 11

Other:

Nothing assigned yet

New reading assignments:

In the following: • MF = MF454 = my course lecture notes • SCF2 = Shreve: Stochastic Calculus for Finance II

• WMS = Wackerly, et al = standard Math 447 Textbook

Reading assignment 1 - due Monday, March 17:

- a. Carefully read MF ch.11.1 - 11.2

Reading assignment 2 - due: Wednesday, March 19:

- a. Carefully read SCF2 ch.4.6.1 - 4.6.2.

Reading assignment 3 - due Friday, March 21:

- a. Carefully read MF ch.11.3 (the remainder of MF ch.11).
- b. Carefully read SCF2 ch.4.6.3 and skip SCF2 ch.4.7 (so it's the remainder of SCF2 ch.4).

Written assignments:

Written assignment 1:

(a) Write from memory the Itô formulas for both the onedimensional and multidimensional case. Take advantage of the shorter versions that employ differentials, especially (11.8) of the twodimensional case.

(b) Write from memory Itô's product rule and MF Proposition 11.1 and Corollary 11.2.

That's it for the Spring Break. Enjoy your time off!