

Math 447 - Fall 2024 - Homework 10

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Status - Reading Assignments:

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

WMS (Wackerly, et al. Textbook):

Ch.1 - 4.8 (non optional parts)

MF447 lecture notes:

Ch.1 - 3, ch.4 (non optional parts), ch.5, ch.6 (strong students), ch.7 - 11.6

Other:

Nothing assigned yet

New reading assignments:

Important: Work through the examples of the reading assignments! This is particularly important for the material starting at MF ch.10 and WMS ch.4!

Reading assignment 1 - due Monday, October 21:

- a. Skim MF ch.11.7.1. It is marked optional, but an easy read and will help you to better understand ch.11.7.2.
- b. Carefully read MF ch.11.7.2. Expect a lot of testing on conditioning with respect to a random element!
- c. Carefully read MF ch.11.7.3.

Reading assignment 2 - due Wednesday, October 23:

- a. Carefully read MF ch.11.8 – 11.9.

Reading assignment 3 - due Friday, October 25:

- a. Skim the optional ch.11.10.
- b. Carefully read WMS ch.4.9 – 4.10.

General note on written assignments: I will not collect those assignments for grading but doing them might be helpful for your quizzes and exams.

(a) Write from memory the following and compare with the MF lecture notes:

- Write from memory the important definitions and theorems of MF ch.11
- Understand that conditioning w.r.t. an independent random element has no effect in the sense that, e.g., $f_{Y_1|Y_2}(y_1 | y_2) = f_{Y_1}(y_1)$.
- independent \Rightarrow uncorrelated. The other direction is guaranteed only for jointly **normal** (Y_1, Y_2) !

(b) No WMS exercises this time.

- Instead, do the fully worked examples and remarks in MF ch.11 and WMS ch.4.