Math 447 - Fall 2025 - Homework 05

Published: Friday, September 12, 2025

Status - Reading Assignments:

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

WMS (Wackerly, et al. Textbook):
    ch. 2.1 - 2.8

MF447 lecture notes:
    ch.1 - 5, ch.7

Other:
    Nothing assigned yet

> Really important: For the WMS reading assignments, work through the examples!

Reading assignment 1 - due Monday, September 15:

  a. Carefully read MF ch.8. Understand that "sample" refers to both the action $\omega \mapsto \vec{(\omega)}$ of taking the sample and the realization $\vec{(\omega)}$ that actually was obtained after performing this action.
  b. Carefully read the remainder of WMS ch.2.

Reading assignment 2 - due: Wednesday, September 17:

  a. Skim MF Ch.6.1. The only items I ask you to remember are Definition 6.2 (Simple Function on Ω), Theorem 6.2 (Important: compare to Remark 4.5, where we illustrated how to approximate $f \geq 0$ by simple functions f_n from below: $f_n \uparrow f$).

Reading assignment 3 - due Friday, September 19:

  a. Skim the optional parts of MF ch.6.2 until Theorem 6.7 (Continuity property of measures).

> **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) Midterm prep:
  • Work through some (more) of the fully worked examples of MF ch.3-5 and ch.y and of WMS ch.3.
  • Review the key definitons and theorems and propositions of those chapters.

(b) All WMS exercises below are odd-numbered, so the solutions are in the book.
  • WMS ch.2.9 exercises: #2.111, 2.113, 2.115, 2.117
  • WMS ch.2.10 exercises: #2.125, 2.129, 2.131, 2.135