MTH 202: PROBABILITY AND STATISTICS
SEMESTER 2, 2015-2016

Course Structure

4/1: Introduction and Section 1.1 of [HPS]
6/1: Section 1.2
7/1: Section 1.3

(End of Week 1)

13/1: Section 1.4
14/1: Section 1.5, 2.1

(End of Week 2)

18/1: Section 2.3, 2.4, 2.5
20/1: 2.6, 3.1 (until Example 2)
21/1: 3.1 (excluding Example 9)

(End of Week 3)

25/1: 3.1 (Example 9 using 3.4.2) , 3.2, 3.3 (only definition)
27/1: 3.3 (including 3.4.1), 3.4
28/1: 3.6

(End of Week 4)

1/2: 4.1, 4.2 (until statement of Theorem 1,2)
3/2: 4.2
4/2: 4.3, 4.4 (excluding Example 12)

(End of Week 5)

8/2: 4.4, 4.6
10/2: 4.6, 5.1
11/2: 5.1

(End of Week 6)

15/2: 5.1, 5.2 (until Example 5)
17/2: 5.2, 5.3
18/2: 5.3.1, 5.3.2

(End of Week 7)

22/2: 5.3.3, 5.4
24/2: 6.1
25/2: 6.1, 6.2.1 (until Theorem 1)

(End of Week 8)

09/3: 6.2.2
10/3: 6.3, 6.4

(End of Week 9)

14/3: 7.1, 7.2, 7.3
16/3: 7.3 (including some of 6.5)
17/3: 7.5, 7.5.1
18/3: 7.5.2

(End of Week 10)

30/3: 8.2
31/3: 8.3

(End of Week 11)

4/4: 8.3, 8.4
6/4: 8.4
7/4: 4.1-4.5 in [H]

(End of Week 12)

11/4: 4.6.1, 8.2.1
13/4: 8.2.3

(End of Week 13)

18/4: 5.10.1, 5.10.2 (excluding Example 3)
21/4: Review
22/4: Review

(End of Week 14)

Instructor Notes

(1) I chose to follow the textbook [HPS] closely as it is an excellent textbook, and this paid off. I believe the students understood the probability part well, and it allowed me to prove both the weak law of large numbers and the central limit theorem (albeit with only a cursory glance towards fourier analysis). The rest of the course was example driven.
(2) Overall, the course is sound, but the number of topics on the syllabus should be cut down to a reasonable amount - the focus needs to be on probability and the two theorems mentioned above. Anything else is extraneous.
(3) Furthermore, the course suffers from a serious lack of interest from the students, perhaps because most of them have decided on a major and choose to ignore subjects they plan to drop. Thus, the attendance dropped to less than half after the mid-sem exam and never recovered.

References

[HPS] Hoel, Port, Stone, *Introduction to Probability Theory, 1st Edition*, Brooks Cole, 1972
[H] Hoel, *Introduction to Mathematical Statistics, 5th Edition*, Wiley, 1962