8. For the exam

All homework of past weeks (see below) +

Part III \& Ch. 10 intro (pp. 277-279), §10.1, 10.2, 10.3.1, 10.4.1, 10.4.2 (only read once diagonally), 10.4.3 (compare Figure 10.4.1 to Figure 7.4.1 on p. 215 to recognize similarity, with simply events iso probabilities), read Theorem 10.5.6 (p. 297) once to know that there exists a preference foundation, Ch. 11 intro (p. 317), §11.1, 11.2, 11.8 only Procedure 11.8.1. Of Ch. 12 (PT for uncertainty), all you have to know is that PT generalizes RDU for uncertainty similarly as it did so for risk, with a different weighting function $\mathrm{W}^{-}$for losses than $\mathrm{W}^{+}$for gains.

Exercises 10.2.1 (p. 284), 10.5.3 (p. 295; nonnull means that all decision weights are positive).

## 7. Wednesday December 12

Study §6.5 first 5 lines, §§6.5.1, 6.5.2, 6.5.4,
§7.6,
§§8.1-8.6 (can skip literature discussion on pp. 244-245, although some may enjoy these kinds of fierce debates), can voluntarily read $\S 8.7$ that was discussed in class, §§9.1, 9.2, 9.3 (up to p 257, and Example 9.3.3), Observation 9.4.1, §9.4.2, §9.5.

Exercises: 7.2.2 (p. 210), 7.8.2 (p. 226), 7.10.1 (p. 230), 7.10.2
9.3.4 (p. 257), 9.4.2 (p. 262), Extra Exercise 9.5.3 (in Extra_exercises_assignments uploaded on Blackboard).

## 6. Wednesday December 5

Study $\S \S 6.4$ (p. 176), 7.2 (study only the neo-additive family; read the rest once so that you can find back those families when needed), 7.4, 7.7, 7.8 (read once), 7.9, 7.10. For volunteers: $\S 7.12$ explains why cavex has problems, what we discussed in class. But you need not read this.

Exercises: 6.4.1 (p. 177), 6.4.3.a-c (done in class), (6.4.4 need not be done for the exam but may interest people working in finance).

It is best to do the following exercises WITHOUT yet reading Section 6.5, which gives many answers. The following exercises are central to the theory to be developed next meeting, so, it is good if you can get them done before the next meeting:
6.5.1 (p. 182) 6.4.2, 6.5.6 (p. 188), 6.5.2 (p. 188; best done after Exercise 6.5.6). For volunteers: the extra assignments for Ch. 6. (Will not be discussed in class.)

## 5. Wednesday November 28

Study all of Ch. $5+\S \S 6.1-6.3+\S 7.1$

## Exercises:

5.1.1 (p. 148), 5.4.1-5.4.4 (p. 157 ff.), 5.6.1-5.6.3 (p. 167 ff.), 6.3.1 (p. 175).

Further homework:
DATA ANALYSIS: Table 4.11 .2 (p. 132) gives a statistical analysis of data of 1996. aand $b$-students are asked to redo this table for our data set. Our data set can be found in blackboard. Give statistics and p-values. Given that directional hypotheses were put forward, you can use one-sided tests.
$b$-students: Do it only once, using a Wilcoxon rank-signed test.
a-students: Do it twice:
(1) Using a t-test.
(2) Using a t-test, but do not do it on the raw data. Instead, renormalize the money amounts, by replacing mu by (mu-alpha^0)/(alpha^4-alpha^0) for all money amounts mu. Those money amounts mu are the alpha^j's, the beta^j's, the gamma^j's, and the delta^j's. Thus, for instance, alpha^ 0 is turned into 0 and alpha^4 is turned into 1 . The normalized beta^ 4 will exceed 1 if and only if the nonnormalized beta^ 4 exceeds the nonnormalized alpha^4.

If you want to have the right to take the exam as an a- or a b-student, please send me an email to that effect before November 28. You can always move up, changing from
b to c , or changing from a to b or c , but you cannot move down. (If you move up later, all you lose is that you did a bit too much homework for it.) a- and b-students please email a file with your results to me before the course of Nov. 28, and have a file with the results of your statistical analysis ready in class on November 28, so that you can present it on the computer to the other students if asked. In particular, have a version of Table 4.11.2 adapted to our data.

## 4. Wednesday November 21

Study of Ch. 4: §§ 4.2-4.6, 4.8.1, 4.8.2, 4.11, 4.12.
Exercises: 4.2.1 (p. 101), 4.2.2, 4.2.3, 4.2.7, 4.3.1-4.3.5 (p. 103 ff .; done in class), 4.5.1 (p. 109), 4.5.3 (shown in powerpoint but now for you to do), 4.6.1 (p. 112), 4.8.1 (p. 115), 4.8.3, 4.8.4, 4.12.1 p. 133.

Those who feel insufficiently challenged intellectually can put their teeth in the assignments on Ch. 4 in the Extra Assignments uploaded on Blackboard.

## 3. Wednesday November 14

Study Ch. 2 §§ 2.1, 2.2, 2.4, 2.5, 2.6, 2.7,
Ch. 3 §§3.1, 3.2, 3.3, 3.4, 3.5 .
Several parts were not treated during the course. Several of you know this material from other courses and then it is easy. For others it is new and then it will be much work.

Ch. 4 §4.1.

## Exercises:

2.1.2 (p. 46), 2.3.1 (p. 49), 2.4.1 (p. 51; write and keep all answers because we use them later), 2.5.1 (p. 54; if trivial can skip), 2.5.2 (if trivial can skip), 2.5.3, 2.5.4, 2.5.5 (done in class), 2.6.2 (p. 58), 2.6.4 (important!), 2.6.6, 3.1.1 (p. 71), 3.2.1a, 3.3.1 (p. 74; done in class), 3.3.3 (only for volunteers but useful; the only modeling exercise in this course), extra Assignments 3.4.2 \& 3.4.3 (not in book but on Blackboard in file "Extra_exercises_assignments.pdf").
Fill out Figures 4.1.1-4.1.5 (p. 96 ff.). Remember, there is no right or wrong, and it is only your preference that counts. Fill your answers out also in the file datamal.doc on blackboard (also emailed to you), and email that file to me. This is a requirement
for getting the homework credit. Also organize your answers so that you have them readily available during the course, because we will discuss them there, where I may ask you to quickly compare them to each other.

## 2. Wednesday November 7

Preface and introduction: read once.
Study §§ 1.1-1.3, skip §1.4, study §§1.5-1.8.
Read Section 1.9 once.
Study Section 1.11 if you want to be a c-person, taking this course in the most theoretical manner.

Please pay attention to the Structural Assumption 1.2.1 (p. 17). It will be assumed throughout the course. Next meeting we discuss decision under risk which, in a somewhat subtle way, is a special case of Assumption 1.2.1. So it will be good that you then have Assumption 1.2.1 readily available from memory.

Exercises (with the superscript system understood):
1.2.1 (p. 16), 1.2.2, 1.2.3, 1.2.4, 1.3.1 (p. 17), 1.3.2, 1.3.3 (done in class), 1.3.4 (done in class), 1.3.5, 1.4.1, 1.5.1 (p. 25; done in class), 1.6.1 (p. 28), 1.6.6, and Assignment 1.6.8. A rule of the game is, obviously, that for each exercise and assignment you can use every result in the book up to that point. This holds in particular for Assignment 1.6.8.

1. Wednesday October 31-
