

Curriculum for Mat2440 spring 2017.

This is the curriculum so far. I plan to follow the book through section 4.5. We shall then switch to control theory and use the notes by Terje Sund, however, I am not sure how far time will permit us to go.

From the book:

Chapter 1:

1.1–1.3; from 1.4 the paragraph called “Population dynamics”; 1.5.

Chapter 2:

2.1–2.6; 2.7 except the paragraph “Alternative methods”; from 2.8 lemma 2.12.

Chapter 3:

Sections 3.1 and 3.2 as a background for the theory. We did not use general metric spaces, but worked only with the function spaces involved. The paragraph in 3.2 about Lipschitz functions is important.

Section 3.3; The entire section, but only the first proof of theorem 3.10.

Section 3.4: The entire section, but theorems 3.15 and 3.16 without proofs.

Section 3.5: The entire section.

Chapter 4:

4.1; 4.2; 4.3 except theorem 4.4; 4.4; 4.5. and theorem 4.7 in section 4.6.

In addition:

Part 3 and 4 from: Terje Sund: *Lectures on optimal control theory.*