Analysis in one variable, fall 2020

Programme November 16–November 20

Due to new recommendations related to Covid-19, all teaching this week is online only. The Zoom link is available on the Canvas course webpage.

Obligatory activities related to this week:

- *Homework.* Homework 5 will be published on Tuesday this week.
- *Mentor meeting.* I would suggest that you use this time to prepare for either of the above activities. However, the mentor meetings are there for you to discuss what you find relevant.

Tuesday 17/11:

- *Preparation for the lecture:* Review your notes to summarize what you still find difficult. This may also include material from Chapter 9. A Mentimeter page will be published on Monday around lunch.

Wednesday 18/11:

- *Problems to solve for the seminar:*
  - 10.83, 10.84, 10.87, 10.93–10.102.
  - The correct equation in 10.94a is
    \[ y' + \frac{1}{x}y = e^{(x^2)}. \]

- *Exercises to present:* (Each group should spend 5–10 minutes in total. *Please note that this means you may not have the time to perform every step of every computation while presenting.*)
  - Mentor group 13: 10.83.
  - Mentor group 14: 10.93.
  - Mentor group 15: 10.96.
  - Mentor group 16: 10.98.
  - Mentor group 103: 10.101.

Friday 20/11:

- *Preparation:* Read the pages 415–443.
- *Exercises to keep you awake while reading:

*Please, turn over!*
- In 11.36, you may assume that $|f|$ is also Riemann integrable.

**Exercises to solve for the seminar:**
- For the formulas in 11.53–11.55 to be valid, you will need to make some assumptions about $f$. State these.

**Exercises to present:** (Each group should spend 5–10 minutes in total. **Please note that this means you may not have the time to perform every step of every computation while presenting.**)
- Mentor group 1: 11.45.
- Mentor group 2: 11.46.
- Mentor group 3: 11.54.
- Mentor group 4: 11.122.
- Mentor group 104: 11.129.