Overview Part 2, INF5610, fall 2012

1 Topics and lectures

- Chapter 12 The Heart
  - *Section 12.1 (14.1): The electrocardiogram.* This is not very important, but nice to read as a background material for those not too familiar with the electrical activity of the heart. Self-study.
  - *Section 12.2 (4.3) : Cardiac cells.* This follows up from the cell models, ionic channels etc introuduced previously, and explains what is special about cardiac cells. Self-study.
  - *Section 12.3 (11.1-11.2): Cellular coupling.* Section 12.3.3 is a key topic and will be covered in the lecture October 12th. The rest of the section is nice to read as background material, but it is not necessary to be familiar with all the detailed mathematical derivations etc. Self study.
  - *Sections 12.4-12.9.* Not covered.
- Chapter 15 Muscle
  - *Sections 15.1-15.4.2 (18.1-18.4.2).* These sections will be covered in the lecture on October 19th. Some details are left as self-study.
  - *Sections 15.4.3 (18.4.3) and onwards.* Not covered.
- Chapter 11 The circulatory system.
  - *Sections 11.1-11.6 (15.1-15.6).* Covered in overview lecture October 26th. Some details are left as self study.
  - *Section 11.7 (15.7).* Not covered
  - *Section 11.8.2 (15.8.2).* Covered in overview lecture.
  - *Sections 11.8.1,11.8.3,11.8.4.* Not covered, but 11.8.1 (15.8.1) may be useful for understanding 11.8.2.

2 Remaining lectures

For the rest of the course, we follow this plan:

- October 12 – cardiac conduction, bidomain model
- October 19 – cardiac muscle contraction
- October 26 – models for the circulatory system
- November 2 – no lecture
- November 9 – summary of key topics. Please send emails in advance if there are topics that you want covered in this lecture. If there are no suggestions, the lecture may be canceled.
- November 16 – another summary lecture if needed.
- November 21 – some final questions before the exam?
- Late November/early December – exam.

3 Mandatory assignment

- Deadline October 19th.

4 Exam format

We practice a lecture form for the oral exam. You will receive six topics two weeks before the exam date, and prepare a 15-20 minutes presentation on each topic. On the exam, you draw one topic and present this. After the presentation, we will ask a few questions related to the other topics of the course. cd