Lab 1: Heart Rate and Data Analysis

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We will begin labs on the first week of class.

Lab Information

Throughout the semester, **Lab information** can be found on the Labs page. Find it on the dropdown under "Course Materials". Listed there are:

- **Lab manuals** which are the experimental protocols for each week, named "Lab1-…"

- **Standard Protocols** for setting up, recording, and saving from the instrumentation. These are on the "Protocols" page.
- **LabChart Quick Reference Guide** for more details on and troubleshooting the LabChart software also on the Protodocs page.

Before Lab:

- Watch Instrumentation Podcast.
- Read Lab 1 and Protocol 1
- Read the Hlimoneko Paper.

- Do Lab 1 PreLab Quiz in Laulima under Tests and Quizzes before lab (based on Hlimoneko). You get 2 tries. *Posted 24 hours before lab.*
- Please bring a bound notebook to lab for your lab notebook. (e.g., a $1 composition book, used is OK)

https://youtu.be/pujrG6zhTJE

In Lab:

- Review Lab Policies
- Perform Lab 1 Data Aquistion and Finger Pulse. *Practical in week 3 on this material*
- Discuss Hlimoneko 2003 Paper [html][pdf]

> After today, you should know how to:
>
> 1. Set up PowerLab
> 2. Start LabChart with proper settings.
> 3. Set up the proper transducer (pulse)
> 4. Be mindful of cord hygiene
> 5. Distinguish signal from noise
> 6. Get a clean baseline
> 7. Be able to modify the scales (amplitude or time) to better display the signal
> 8. Add and edit comments
> 9. Calculate HR
> 10. Get a good recording with all events commented, save, and share data

After Lab: Assignment Week 1:

- Write the Methods and Text of the Results for select figures in Wilkinson et al 2000 (assignment instructions). Don t forget to follow the lab report guidelines
- Turn in one copy (hardcopy) at the start of your next lab session. *Always one week after the lab*

Notes:

A rough guide to length for this mini-lab is 1-2 pages. Content is more important than length. You do not need to fill up the 2 pages (if you finish in 1.5 pages, that's even better).

The first lab will focus on data analysis to set you up well for the remaining labs in this class. Please try hard to understand the mechanisitic and conceptual connections between data and ideas/conclusions.

As this is a group assignment, you will be turning in one assignment per group. Include the full names of each lab member and who is Project Coordinator at the top, as well as a **Respective Contributions** section at the end.

If you are confused about any of the instructions or have any questions about the assignments, please send let us know.

General Lab Course Info:

- Lab Report Guidelines
- Lab Expectations
- Notebook Instructions
- Lab Team Timeline Agreement