

CHAPTER OVERVIEW

Preliminaries

In this introductory section for PHC 6050 and PHC 6052, we will:

- Define statistics and biostatistics
- List the five steps in a typical research project and discuss the roles biostatistics can play in each
- Introduce the Big Picture of Statistics, which is the foundation of our course, and define and discuss its four components
- Introduce fundamental definitions related to data, datasets, and variables.
- Explain the different types/classifications of variables and introduce why this is important in biostatistics

Here are links to a few other online materials similar to 6060/6052 which you may find useful as secondary references

- Materials on which we based the 6050/6052 course: <https://oli.cmu.edu/jcourse/webui/guest/join.do?section=probstat> (click ENTER COURSE or create an account and login)
- Very similar course through Penn State: <https://onlinecourses.science.psu.edu/stat500/>
- <http://onlinestatbook.com/index.html>
- <http://www.seeingstatistics.com/>
- <http://www.jerrydallal.com/LHSP/LHSP.HTM>
- <https://www.openintro.org/stat/>
- https://en.wikiversity.org/wiki/Introduction_to_Statistical_Analysis
- <https://ocw.mit.edu/courses/mathematics/18-05-introduction-to-probability-and-statistics-spring-2014/index.htm>

[Role of Biostatistics](#)

[The Big Picture](#)

[Types of Variables](#)

[What is Data?](#)

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