**Biomedical methods II**

**(Course leader: Anna Rosanas)**

For each thesis topic an overview of techniques and skills that are required to execute the project will be made available at the moment of application. Based on the student’s profile and the thesis topic selected an individual biomedical methods training program will be drawn up in consultation with the thesis supervisor. This course builds on the biomedical methods I offered in cluster 2 of the MSc in Tropical Medicine-orientation biomedical Sciences in which the students have acquired the theoretical background on methods needed for their thesis topic. In this course students will put the methods learned in biomedical methods I into practice and will be prepared for the research part for the thesis.

**Number of credits**

10 ECTS

**MODE OF STUDY**

This course (component) is organized : Coached individual learning & Self-directed study

**LEARNING OBJECTIVES**

## At the end of this module the students will be able to:

## Perform various scientific techniques related to the thesis topic correctly and accurately.

## Critically reflect on the information collected, the research conducted and the results obtained.

## Use a lab notebook according to scientific standards

* Read and write a standard operating procedure for laboratory research or systematic reviews

**Number of Credits**

10 ECTS

**CONTENT**

* Standard operating procedures for laboratory research (lab oriented thesis topics only)
* Standard operating procedures for systematic reviews (systematic review thesis topics only)
* Hands-on training on selected methods related to the thesis topic

**TEACHING AND LEARNING METHODS**

* Organisational methods
	+ Collective feedback moment
	+ Tutorial
* Teaching methods
	+ Discussion
	+ Paper

**ASSESSMENT**

The students laboratory performance of the students will be assessed by means of the lab notebook.

Assessment criteria Lab Notebook:

1. Neat and legible handwriting
2. Experiment title and purpose clearly stated
3. Procedure described clearly and succinctly, including errors and the steps taken to correct

 them

1. Computations performed neatly showing intermediate steps
2. Errors crossed out with a single line and explained
3. All pages dated at the top and signed by lab professor on the same date

**Prerequisites**

* Successful completion of Biomedical methods I
* Be able to read and write in English

**Staff involved**

Each student will be coached for his/her thesis in one of the units in the department:

Prof Jean-Claude Dujardin

Prof Luc Kestens

Prof Philippe Büscher

Prof Stijn Deborggraeve

Prof Ana Rosanas (course leader)

Prof Kevin Ariën

Prof Bouke De Jong

Prof Pierre Dorny

Prof Katja Polman

Prof Rüth Müller

Prof Jan Van Den Abbeele

**Literature used**

* [Barbé, B., Verdonck, K., Mukendi, D., Lejon, V., Lilo Kalo, J. R., Alirol, E., … Jacobs, J. (2016). The Art of Writing and Implementing Standard Operating Procedures (SOPs) for Laboratories in Low-Resource Settings: Review of Guidelines and Best Practices](https://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0005053)
* Systematic Reviews in Health Care: Meta‐Analysis in Context, Second Edition. Matthias Egger and George Davey Smith (2001).