Linnæus University

Dnr: UGA 2013/323.3.1.2

Course syllabus

Faculty of Health and Life Sciences

Department of Chemistry and Biomedical Sciences

2BL01E Examensarbete i biomedicinsk laboratorievetenskap, 15 högskolepoäng

2BL01E Degree project in Biomedical laboratory science, 15 credits

Main field of study
Biomedical Laboratory Science

Subject Group
Biomedical Laboratory Science

Level of classification
First Level

Progression
G2E

Date of Ratification
Approved 2011-11-07
Revised 2013-02-15 by Faculty of Health and Life Sciences.
The course syllabus is valid from spring semester 2013

Prerequisites
75 credits worth of courses in biomedical laboratory science, Cell and molecular biology 7.5 credits, Anatomy and Physiology 10.5 credits, or the equivalent, and basic knowledge of statistics and scientific methodology.

Objectives

After completing the course, the student should be able to:

- independently plan and conduct scientific laboratory experiments
- formulate research questions within the field
- gather relevant background information
- adapt experimental studies to relevant research questions, available analysis methods, and time constraints
- perform their own laboratory experiments
- present collected data
- produce an in-depth synthesis with conclusions drawn from their own data and results of other tests of theories of relevance in the given context
- evaluate results and conclusions in their own study
- write a manuscript for a scientific article following a template

- orally present results and conclusions from the study
- critically review a manuscript written by a fellow student and provide oral feedback during the examination
- apply an ethical approach.

Content

- Identification of a problem and formulation of research questions within a subject area of biomedical laboratory science.
- Experiment design.
- Laboratory experiments.
- Analysis and statistical processing of data.
- Interpretation and synthesis of the student's own and others' results.
- Compilation of a manuscript for a study within biomedical laboratory science.
- Oral presentation of results and conclusions.
- Critical evaluation and oral feedback on a manuscript.

Type of Instruction

The course is conducted as an individual laboratory study with the support of a supervisor. The student and supervisor together decide how often and for how long they will meet. Instruction consists of planning and conducting laboratory experiments in the field of biomedical laboratory science.

Examination

The course is assessed with the grades Fail (U), Pass (G) or Pass with Distinction (VG).

At the end of the course the supervisor submits a student assessment. The course is examined through a written report on the laboratory experiments conducted in the course, an oral presentation of the results and conclusions of the study, and critical peer review of a fellow student's manuscript. All the elements of the course – including the supervisor's student assessment, the oral and written examination, and the peer review.

The grading criteria for the grade of Pass are based on the course obejctives (see above).

Course Evaluation

A written course evaluation is conducted at the end of the course, archived by the department’s administration, and communicated to the programme coordinator.

Required Reading and Additional Study Material

Eljertsson, G. *Grundläggande statistik med tillämpningar inom sjukvården.* Studentlitteratatur, Lund. The latest edition,

or

Björk, J. *Praktisk statistik för medicin och hälsa.* Liber AB, Stockholm. The latest edition.

Kumar, R. *Research Methodology – a Step by Step Guide for Beginners*. SagePublications. ISBN 141291194X