FKD3320 Trace Metal Analysis and Speciation 2.5 credits

Spåranalys och speciering av metaller

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for FKD3320 valid from Spring 2020

Grading scale

P, F

Education cycle

Third cycle

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After completion of the course the student should have the knowledge and ability to

1. Conduct and orally present results of an individually conducted systematic method development in the lab within the area of trace metal analysis and speciation. The method development must be conducted on another system or instrument than what is used by the student within his/her Ph.D. studies. (LAB1)

2. Orally present a scientific article (or equivalent) within the area of trace metal analysis and speciation to the group, and be opponent to a presentation of a scientific article (or equivalent) within the area of trace metal analysis and speciation, as well as participate at least 70% at the seminars. (SEM1)

Course contents

The overall aim is to provide necessary theoretical and practical knowledge in order to critically assess analytical results for trace metal analysis and metal speciation analysis. The student should after completing the course be able to perform analytical method developments within trace metal analysis and speciation, considering contamination sources, determination of detection and quantification limits, and statistics. The student should furthermore know the basics of data evaluation and method development for any trace metal analytical technique and to some extent metal speciation analytical techniques.

The course consists of two parts, which are conducted in parallel. The laborative part LAB1 corresponds to 1.5 credits (40 hours) and the theoretical part SEM1 corresponds to 1 credits (27 hours) both for preparation and participation / lab time.

Specific prerequisites

Eligible to third cycle studies.

Examination

- DEL1 - Participation, 0.5 credits, grading scale: P, F
- LIT1 - Literature assignment, 0.5 credits, grading scale: P, F
- PRA1 - Practical training, 0.5 credits, grading scale: P, F
- PRO1 - Project, 0.5 credits, grading scale: P, F
- SEM2 - Seminars, 0.5 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

The learning outcome 1 is examined by the course part LAB1 (1.5 credits), and the learning outcome 2 by the part SEM1 (1 credit). In order to pass the course, the student needs to successfully pass each of the course parts and thereby each learning outcome.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.