



# FCK3302 Radio Chemistry 9.0 credits

**Radiokemi**

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

## **Establishment**

Course syllabus for FCK3302 valid from Spring 2019

## **Grading scale**

P, F

## **Education cycle**

Third cycle

## **Specific prerequisites**

Eligible for studies at the third-cycle level.

## **Language of instruction**

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

## **Intended learning outcomes**

After completing the course the student will be able:

- To describe fundamental concepts in radiochemistry, radioanalytical chemistry, radioecology and actinide chemistry and account for and analyze applications of these within the fields of environmental chemistry and nuclear engineering. (SEM1).
- To orally and in written form account for an application of the course contents in a research area of current interest. (PRO1).

## Course contents

Basic Nuclear Chemistry

Radioactive decay and decay chains

Detection of ionizing radiation

Fundamental radiochemistry

Radioanalytical chemistry

Radioecology

Actinide chemistry

Applications in nuclear engineering.

## Disposition

The course consists of lectures 8 h, seminars 20 h and independent work 180 h (studies and project).

## Course literature

Chemistry and Analysis of Radionuclides: Laboratory Techniques and Methodology, J. Lehto and X. Hou, Wiley, and handouts.

## Examination

- DEL1 - Participation, 1.0 credits, grading scale: P, F
- PRO1 - Project, 5.0 credits, grading scale: P, F
- SEM1 - Seminar, 3.0 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.

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

Grading criteria are specified in the course PM.

## **Other requirements for final grade**

Learning outcomes completely fulfilled (passed DEL1, PRO1 and SEM1).

## **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.