

Table 5.2 Course specification

Level: Master
Course title: Methodology of chemistry education research
Status: obligatory
ECTS: 5
Requirements: none
Course aim The aim of this course is to enable a student to independently collect, compile and study literature, select optimal statistical procedures for data processing, and independently write a scientific paper.
Course outcome At the end of this course, the student will be able to: Independently collect, study and prepare the literature needed to write a scientific paper; Properly plan the experiment using the appropriate scientific method; Select and apply statistical procedures to analyze collected data; Properly interpret research findings; independently write a scientific paper with the correct reference to the literature.
Course content <i>Theory</i> The aim of the research focused on teaching methodology in chemistry education; Stages in pedagogical research; Review of literature; Methods of pedagogical research (descriptive and experimental methods); Methodology of pattern formation; Types and construction of data collecting instruments. Selection of adequate statistical procedures for analyzing collected data; Interpretation of research results; Rules for writing a scientific paper. <i>Practice: Practical classes, OFT, SRW</i> Techniques of collecting relevant literature; Design of research instruments; Selection of research sample; Analysis of the results using appropriate software packages.