

Table 5.2 Course specification

Level: Master
Course title: Methodology of Scientific Research
Status: obligatory
ECTS: 5
Requirements: none
Course aim The goal of this course is to enable students to apply the standard methodology in solving problems in scientific research in the field of chemistry. In addition, one of the goals is to provide a broad, yet balanced knowledge, which will enable students to independently collecting, sorting, studying and writing a scientific paper.
Course outcome Upon successful completion of this course the student is able to: <ul style="list-style-type: none">➤ Understand the importance of scientific research and distinguish scientific and skilled paper,➤ Use suitable methodological approach in the selection of topics for the scientific research,➤ Independently collect, sort and study the literature required for writing a scientific paper by applying knowledge gained in the use of the index database KOBSON and adequate services for literature search in electronic and paper form,➤ Properly plan experiment with the application of appropriate scientific methods to experiment with less reach as many quality facts, and➤ Process, present the results of independent research and write a research paper with proper citation of the literature.
Course content <i>Theory</i> The importance of scientific research. The difference between the scientific and skilled article. Stages of scientific research. The choice of topics. Review of the literature. Experiment. The structure and writing a scientific paper. Types of research papers. Evaluation of scientific work. <i>Practice: Practical classes, OFT, SRW</i> The techniques of collection, processing and analyzing literature. Search selected electronic databases (KOBSON, Scopus, Web of Science, Cobiss, etc.). Interpreting the results. Graphical presentation of data. Writing a paper. Citing references.