

Table 5.2 Course specification

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| Level: Master |
| Course title: Modern forms of teaching chemistry |
| Status: elective |
| ECTS: 5 |
| Requirements: none |
| Course aim Introducing students - future chemistry teachers with modern concepts of teaching process in order to acquire knowledge and skills for quality work in modern chemistry teaching. |
| Course outcome At the end of this course, the student will be able to: Consider the importance of applying new forms of teaching with the aim of overcoming mechanical and promoting meaningful learning while increasing the motivation for learning chemistry; critically evaluate aspects of traditional chemistry teaching and apply contemporary forms of teaching in a real school environment. |
| Course content <i>Theory</i> Specificities of chemistry teaching and learning; The need and importance of innovating chemistry teaching; Principles of effective teaching; Motivation for learning chemistry; Meaningful and mechanical learning; Contemporary forms of learning and teaching (teaching based on a triplet model of content representation, systematic approach to learning and teaching, context-based teaching, problem-based teaching, flipped classroom, research-based learning, cooperative learning, mosaic method). <i>Practice: Practical classes, OFT, SRW</i> Analysis of textual materials on the application of modern forms of teaching chemistry, published in professional and scientific journals. Implementation of modern forms of learning and teaching chemistry through group work of students on selected chemical teaching contents. |