Level: PhD

Course title: METHODS AND TECHNIQUES OF LEARNING CHEMISTRY – ADVANCED COURSE DMH607H1

Status: elective

ECTS: 15

Requirements: none

Learning objectives:
Training for effective self-study of chemistry within the professional development of chemistry teachers.

Learning outcomes:
After completing the course, a PhD student is able to:
• demonstrate advanced knowledge of techniques of learning chemical content;
• successfully organize chemical content into a complex system of knowledge;
• successfully organize and conduct pedagogical research in the field of methods and techniques of learning chemistry.

Syllabus
Theoretical instruction
The basic strategies of learning chemistry. Collaborative learning and its forms of learning chemistry. Application of concepts and associations. Active learning in chemistry. Understanding the chemical textbooks. The development of spatial visualization abilities of abstract concepts. Visualization in modern chemistry teaching in primary and secondary education.

Practical instruction
Exercise in chemical language. Practice problem assignments. Creating concept maps for educational content in general, organic, physical, analytical chemistry and biochemistry. Using databases in learning chemistry.

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	