

Abstract: This master thesis is focused on teaching the hydrogen atom on a university and high school level. The objective of this thesis is to compare approaches to hydrogen atom in available university study materials. Based on this comparison, a study text appropriate for the second year students of education of Physics at FMP CU attending the Quantum mechanics course has been prepared. The second goal is to chart available study materials concerning hydrogen atom suitable for high school students. A seminar for high school students has been designed and piloted. Within this seminar, the students were introduced to the hydrogen atom and atomic orbitals. A worksheet for the seminar and an informative text for teachers are enclosed in this thesis together with several tasks published in the Collection of Solved Problems in Physics.