Study program	Level of studies	Third cycle
	Title of the study program	Science and mathematics education

COURSE

Course title	**Selected Chapters in Quantum Physics**

Course ID	Semester	Course status	ECTS credits	Contact hours
PTH673	I	Elective	10	60

Lecturers	Lecturer in charge	Prof. dr. Dejan Milošević
	Other lecturers	

Course aims	Deepening knowledge about selected topics in quantum physics.

CONTENT

#	Teaching units	Contact hours		
		L	E/S	C
	- Introduction - Probability amplitudes - Identical particles - Spin 1 and spin ½ - The dependence of amplitudes on time - The Hamiltonian matrix - Two-state systems - Applications in solid state physics - Symmetries and conservation laws - Angular momentum - Modern areas of quantum physics	30	30	

LITERATURE

1. R. P. Feynman, R. B. Leighton, M. Sand, *The Feynman Lectures on Physics*, Vol. 3, Addison-Wesley, Reading, 1963.
2. P. A. Tipler, R. Llewellyn, *Modern Physics*, 6th ed., 2012.
3. C. Schiller, *The Adventure of Physics*, Vol. IV, *The Quantum of Change*, Motion Mountain, 25th ed., www.motionmountain.net, 2012.
4. A. Beiser, *Concepts of Modern Physics*, 6th ed., McGraw-Hill, 2003.
5. Original scientific articles

ASSESSMENT OF LEARNING

	Assessment method	Points	Threshold
1.	Tests	30	16
2.	Seminar papers	30	17
3	Final exam	40	22
4.			
	Total	100	55