

<b>Study programmes:</b> MASTER STUDIES – Astronomy and Astrophysics			
<b>Course name:</b> Relativistic Quantum Mechanics			
<b>Lecturers:</b> Maja Buric and other lecturers			
<b>Status:</b> Optional			
<b>ECTS:</b> 8			
<b>Attendance prerequisites:</b> Quantum Mechanics 1,2.			
<b>Course aims:</b> Understanding of the main features of quantum and relativistic description of particles.			
<b>Course outcome:</b> The students should learn and understand the following properties of relativistic quantum equations, in particular the Dirac equation: Lorentz symmetry, interaction of electrons with the electromagnetic field, particle creation and annihilation. The student should learn further the basic concepts of scattering theory and its diagrammatic representation through the Feynman diagrams.			
<b>Course content:</b>			
<b>Literature:</b>			
1. Relativistic Quantum Mechanics, James D Bjorken and Sidney D. McGraw-Hill, 1998			
2. Relativistic Quantum Mechanics. Wave Equations, Walter Greiner and D.A. Bromley Springer, 2000			
3. Problem Book in Quantum Field Theory, V. Radovanovic, Springer-Verlag 2007			
<b>Number of hours:</b> 7	<b>Lectures:</b> 3	<b>Tutorials:</b> 2	<b>Laboratory:</b> 0
<b>Research:</b> 2			
<b>Teaching and learning methods:</b>			
<b>Assessment (maximal 100 points)</b>			
<b>Course assignments</b>	<b>points</b>	<b>Final exam</b>	<b>points</b>
Lectures	15	Written exam	35
Exercises / Tutorials	15	Oral exam	35
Colloquia	-	Written-oral exam	-
Essay / Project	-		