Course Syllabus

1. Annotation

Course Description

The course is addressed to students who know the basics and basic principles of quantum theory. Physical applications of quantum theory on examples of specific problems will be considered. It is planned to study the following issues: supersymmetric quantum mechanics, motion of a charged particle in a uniform and constant magnetic field, electromagnetic field interacting with an external source, the Caldeira-Leggett model, the band structure of one dimensional systems, the basics of quantum Informatics. As can be seen from the list, the purpose of the course is to prepare the student for the study of quantum field theory. Students will be asked to choose their own topics to be discussed.

Course Prerequisites

Students should have knowledge of basic principles of quantum theory.

2. Structure and Content

Course Academic Level

Master-level
Number of ECTS credits

3. Assignments

4. Grading

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
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<tr>
<td>A</td>
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5. Basic Information

6. Textbooks and Internet Resources

7. Facilities

8. Learning Outcomes

9. Assessment Criteria

Input or Upload Example(s) of Assignment 1:

Input or Upload Example(s) of Assignment 2:

Input or Upload Example(s) of Assignment 3:

Input or Upload Example(s) of Assignment 4:

Input or Upload Example(s) of Assignment 5:
10. Additional Notes