## Module: Theoretical Physics

### Module title and Abbreviation

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<th>FOKUS Research Module Type VKM14T Theoretical Physics</th>
<th>11-FM-VMK14T-072-m01</th>
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### Module Coordinator and Offered by

| chairperson of examination committee | Faculty of Physics and Astronomy |

### ECTS, Method of Grading, and Duration

<table>
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<tr>
<th>14</th>
<th>numerical grade</th>
<th>Only after succ. compl. of module(s)</th>
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<tbody>
<tr>
<td>1 semester</td>
<td>graduate</td>
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### Contents

Specific and advanced knowledge of independent scientific work in a current research area, especially in the discipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competencies. Application of the acquired professional knowledge and methods to new scientific questions in a mini research project (e.g. experiments, case studies etc.).

### Intended Learning Outcomes

The students have special and advanced knowledge of independent scientific work in a current research area, especially in the specialist field of Theoretical Physics, and are able to reproduce the acquired knowledge, to apply the acquired methods, to summarise a sub-area of the current research area in an oral presentation and to successfully implement the acquired knowledge and methods in a mini research project.

### Courses

- **FOKUS Einführungsmodul Theoretische Physik (FOKUS Introductory Module Theoretical Physics):** V (3 weekly contact hours) + Ü/P (2 weekly contact hours), details on availability to be announced.
- **FOKUS Kompaktseminar Theoretische Physik (FOKUS Block Taught Seminar Theoretical Physics):** S (2 weekly contact hours), German or English, details on availability to be announced (block taught seminar (3 days), usually held during semester break).
- **FOKUS Miniforschungsprojekt Theoretische Physik (FOKUS Mini Research Project Theoretical Physics):** P (2 weekly contact hours), German or English, details on availability to be announced (approx. 3 weeks, part time).

### Method of Assessment

This module has the following assessment components:

1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages).
2. Seminar: talk (approx. 30 to 45 minutes).
3. Research project: project report (approx. 8 pages).

Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.

### Allocation of Places

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### Additional Information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Module Appears in

- Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)
- Master's degree (1 major) FOKUS Physics (2010)
- Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006)
Master's degree (1 major) FOKUS Physics (2006)