

Theoretische Physik 3

Quantenmechanik

WS 2023/2024

Lecturers :

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Website

<https://www.th.kph.uni-mainz.de/theoretische-physik-3-quantenmechanik-6/>

Lecture hours

Wed 12:15 - 13:45, Room 00 311 C02

Fr 8:15 - 9:45, Room 00 421 N6

Exam (Klausur)

23/02/2024 (9:00 - 12:00)

Schedule

- **25/10, 27/10**
wave function, statistical interpretation, probability, normalization, momentum, uncertainty principle, stationary states,
- **03/11, 08/11**
infinite square well, harmonic oscillator
- **10/11, 15/11**
free particle, wave packets, delta function potential
- **17/11, 22/11**
finite square well and applications, WKB approximation
- **24/11, 29/11, 01/12**
Operator formalism
- **06/12, 08/12**
Schrödinger equation in spherical coordinates (angular solution), angular momentum
- **13/12, 15/12, 20/12, 22/12**
spherical potential well, hydrogen atom
- **10/01, 12/01**
spin, addition of angular momenta
- **17/01, 19/01**
EPR paradox, Bell's theorem
- **24/01, 26/01, 31/01**
perturbation theory: time-independent
- **02/02, 07/02**
perturbation theory: time-dependent
- **09/02**
review