

Module Handbook

TUK MODHB Homepage

Course PHY-PFEP-020-K-2

Mechanics and heat (4V+2U, 8.0 LP)

Course Type

SWS	Type	Course Form	CP (Effort)	Presence-Time / Self-Study
-	K	Lecture with exercise classes (V/U)	8.0 CP	156 h
4	V	Lecture		56 h
2	U	Exercise class (in small groups)		28 h
(4V+2U)			8.0 CP	84 h 156 h

Basedata

SWS	4V+2U
CP, Effort	8.0 CP = 240 h
Position of the semester	1 Sem. in WiSe/SuSe
Level	[2] Bachelor (Fundamentals)
Language	[DE] German
Lecturers	The Lecturers of the department Physics
Area of study	[PHY-EP] Experimental Physics
Lifecycle-State	[NORM] Active

Notice

Die Lehrveranstaltungen werden im Rahmen des Programms „Früheinstieg in das Physikstudium“ (FiPS) auch im Fernstudium angeboten, siehe <https://www.fernstudium-physik.de>

Possible Study achievement

- Verification of study performance: **proof of successful participation in the exercise classes (ungraded)**
- Examination number (Study achievement): 57111 ("Mechanics and heat")
- Details of the examination (type, duration, criteria) will be announced at the beginning of the course.

Exercise certificate usually by active participation in the exercises and successful completion of homework.

Contents

- Einführung und Überblick zur Mechanik eines Massenpunktes
- bewegte Bezugssysteme und spezielle Relativitätstheorie
- Systeme von Massenpunkten
- Stöße
- Dynamik starrer Körper
- reale, feste und flüssige Körper
- Gase
- strömende Flüssigkeiten und Gase
- mechanische Schwingungen und Wellen
- Wärmelehre

Literature

- Demtröder: Experimentalphysik 1, Springer
- Meschede: Gerthsen Physik, Springer

Materials

Current information and materials accompanying the course will be announced in the lecture or on the website of the course.

Registration

Registration for the exercises is required. Details will be announced during the first lecture.

Requirements for attendance (informal)

Modules:

- [PHY-FP-LA-M-7] Fortgeschrittenen-Praktikum (M, 8.0 LP)

Requirements for attendance (formal)

Die Anmeldung erfolgt persönlich bei der Praktikumsleiterin bzw. dem Praktikumsleiter innerhalb der per Aushang und auf der Homepage des Fortgeschrittenenpraktikums angekündigten Anmeldezeiträume.

References to Course [PHY-PFEP-020-K-2]

Module	Name	Context	
[MAT-PHY-EX-M-4]	Experimental Physics I/II (for Mathematicians)	P: Obligatory	4V+2U, 8.0 LP
[PHY-EP1-M-2]	Experimentalphysik 1: Mechanik, Thermodynamik	P: Obligatory	4V+2U, 8.0 LP
[PHY-G1-M-2]	Fundamentals of classical physics I	P: Obligatory	4V+2U, 8.0 LP

