

COURSE TYPE 3: HYBRID TEACHING COURSE „PARTICLE THERAPY” (EN, 37 TEACHING UNITS (TUs); 1 TU = 45 min.)

The *Hybrid Teaching Course Particle Therapy* is dedicated to **national** and **international** colleagues (physicians, medical physics experts or physicist), young scientists and students who would like to get a deeper understanding of the physics of particle therapy and its clinical application. It comprises of 37 teaching units and is hosted in English. The **first online test** covers all topics of the online phase and can be done during two weeks of the online phase. The **second online test** covers all topics taught live online on Zoom as well as during the hybrid attendance phase end of November. It can be done during two weeks after the course (dates see course website). Participants will end up with a certificate of attendance with supplement, issued by the German Cancer Research Center (DKFZ), **which is not** relevant for the “Fachkunde Partikeltherapie” but it indicates all TUs of the course, including ECTS points. Regular attendance during all live sessions as well as the successful completion of both online tests are the prerequisite to get the certificate of attendance.

ONLINE PHASE OCT. 14 – NOV. 24, 2024 (21 TUs)		ONLINE SESSIONS ON ZOOM (7 TUs)	HYBRID ATTENDANCE PHASE ¹ (9 Tus ²)	
Physical basics of particle therapy (2 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Clinical particle therapy: Pancreatic and rectal cancer (1 TU; EN) <i>Dr. Semi Harrabi, Heidelberg</i>	MON. NOV. 25, 2024 3.30 – 4pm Online-ID-Check 4 – 5.30pm Advanced Radiobiology, part 2: task discussion (EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>	THU. NOV. 28, 2024 12.30 – 2pm Special clinical indications I: bronchial and mamma carcinoma, CNS and HNO tumors (EN)* <i>Dr. Semi Harrabi, Heidelberg</i>	FRI. NOV. 29, 2024 8.30 – 10.00am Treatment Planning for Ion Beams II: Hands-on Planning (EN)* <i>Dr. Niklas Wahl, Heidelberg</i> <i>Dr. Amit Ben Anthony Bennan, Heidelberg</i>
Radiobiological basics of particle therapy (2 TU; EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>	Introduction: IGRT for particle therapy: techniques (1 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	5.30 – 6pm Break 6 – 7.30pm Case discussion: medicine & physics (EN) <i>Prof. Dr. Christian Karger & Dr. Semi Harrabi, Heidelberg</i>	2 – 2.30pm Break 2.30 – 3.15pm Special aspects of stochastic radiation effects of neutrons in particle therapy (neutrons) (EN)* <i>Prof. Dr. Christian Karger, Heidelberg</i>	10.15 – 11am Current technical standards and experimental technologies in particle therapy, part 2 (EN)* <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>
Particle therapy facilities: beam production and delivery (2 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	IGRT for particle therapy: clinical perspective (1 TU; EN) <i>Dr. Semi Harrabi, Heidelberg</i>	TUE. NOV. 26, 2024 4 – 4.45pm Adv. Organ Motion Management (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	11 – 11.15am Break 11.15am – 12.45pm Special clinical indications II: skull base tumors, chordoma, chondrosarcoma, sarcoma, hip tumors, lymphoma & pediatric tumors (EN)* <i>Dr. Katharina Seidensaal, Heidelberg</i>	11.15am – 12.45pm Special clinical indications II: skull base tumors, chordoma, chondrosarcoma, sarcoma, hip tumors, lymphoma & pediatric tumors (EN)* <i>Dr. Katharina Seidensaal, Heidelberg</i>
Dosimetry and QA (2 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Adv. Dosimetry and QA for particle therapy (1 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	4.45 – 5pm Break 5 – 6.30pm Pro Contra FLASH (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg & Dr. Jeannette Jansen, Lausanne</i>	12.45 – 2pm Break 2 – ca. 3/3.30pm Guided tour at HIT (on-site, optional)	12.45 – 2pm Break 2 – ca. 3/3.30pm Guided tour at HIT (on-site, optional)
Treatment Planning for Ion Beams I (2 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Advanced Radiobiology, part 1 (incl. tasks) (1 TU; EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>			
Current technical standards and experimental technologies in particle therapy, part 1 (1 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Case presentation: medicine (0,5 TU; EN) <i>Dr. Semi Harrabi, Heidelberg</i>			
Incidents in particle therapy (1 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Case presentation: physics (0,5 TU; EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>			
Introduction: clinical rationale for particles (1 TU; EN) <i>Prof. Dr. Dr. Jürgen Debus, Heidelberg</i>	Introduction: FLASH Radiotherapy with Particles, incl. task (1 TU; EN) <i>Dr. Jeannette Jansen, Lausanne</i>			
Clinical particle therapy: Liver & esophagus (1 TU; EN) <i>Dr. Semi Harrabi, Heidelberg</i>				

As of Mar. 19th 2024, subject to changes!

¹Venue of the attendance phase: see course website: www.dkfz.de/particle_course_en

² Both online tests are counted as 1 TU of the hybrid attendance phase.

Organizer:



Partners:

