

COURSE TYPE 2: TEACHING COURSE PARTICLE THERAPY, INCLUDING SPECIALIZED COURSE (EN & DE, 38 TEACHING UNITS (TU); 1 TU = 45 min.)

The teaching course *Particle Therapy* is an extended version of the *Specialized Course Partikeltherapie**. It is designed for those who would like to get a deeper understanding of particle therapy and its clinical application as well as those who would like to gain the "Fachkunde Partikeltherapie". The 24 teaching units (TUs) of the *Specialized Course Partikeltherapie* relevant for the "Fachkunde" are written in black, the additional 14 TUs (not counted toward the "Fachkunde") are highlighted in light red. The abbreviations "EN" and "DE" indicate the teaching language and the language of exam questions.

ONLINE, 21.10. – 27.11.2019	THU, NOV. 28 2019 (K2, DKFZ)	FRI, NOV. 29 2019 (K2, DKFZ)	SAT, NOV. 30 2019 (K2, DKFZ)
Physical basics of particle therapy (2 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>	09.00 – 09.45am Adv. dosimetry and QA for particle therapy (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	09.00 – 10.30am Special clinical indications I: bronchial and mamma carcinoma, CNS and HNO tumors (EN) <i>Dr. Semi Harrabi, Heidelberg</i>
Radiobiological basics of particle therapy (2 TU) (EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>	Clinical particle therapy: Liver & esophagus (1 TU) (EN) <i>Dr. Semi Harrabi, Heidelberg</i>	09.45 – 10.30am Molecular and cellular radiation effects: How beam quality matters! (EN) <i>Dr. Peter Peschke, Heidelberg</i>	10.30 – 10.45am Coffee break
Incidents in particle therapy (1 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>	10.30 – 11.00am Coffee break	10.45 – 12.15pm Special clinical indications II: skull base tumors, chordoma, chondrosarcoma, sarcoma, hip tumors, lymphoma & pediatric tumors (EN) <i>PD Dr. Matthias Uhl, Heidelberg</i>
Particle therapy facilities: beam production and delivery (2 TU) (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Case presentation: medicine (1 TU) (EN) <i>Dr. Semi Harrabi, Heidelberg</i>	11.00 – 11.45am IGRT for particle therapy: clinical perspective (EN) <i>Dr. Semi Harrabi, Heidelberg</i>	12.15 – 12.45pm Coffee break
Dosimetry and QA (2 TU) (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Case presentation: physics (1 TU) (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	11.45 – 12.30pm Organ Motion Management (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	12.45 – 01.45pm Course review and written exam (DE & EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>
Treatment Planning for Ion Beams I (2h) (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	Introduction: IGRT for particle therapy: techniques (1 TU) (EN) <i>Prof. Dr. Oliver Jäkel, Heidelberg</i>	12.30 – 01.30pm Lunch break	01.45 – 02.00pm Conclusion
		01.30 – 03.00pm Advanced Radiobiology (EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>	02.00pm Guided Tour „HIT Facility“ (optional)
		03.00 – 03.30pm Coffee break	
		03.30 – 05.00pm Case discussion: medicine & physics (EN) <i>Prof. Dr. Oliver Jäkel, Dr. Malte Ellerbrock & Dr. Semi Harrabi, Heidelberg</i>	
		06.00pm Get Together Christmas Market (optional)	
			01.30 – 02.15pm Special aspects of stochastic radiation effects of neutrons in particle therapy (neutrons) (EN) <i>Prof. Dr. Christian Karger, Heidelberg</i>
			02.15 – 03.00pm Baulicher und organisatorischer Strahlenschutz (DE) <i>Dr. Stefan Scheloske</i>
			03.00 – 03.30pm Coffee break
			03.30 – 05.00pm Rechtliche Besonderheiten (DE) <i>Thomas Knoch, Heidelberg</i>
			<i>Subject to changes!</i>

*Der Kurs dient zum Erwerb der Fachkunde gemäß Ziffer 3 Anlage 1 des Rundschreibens des Bundesministeriums für Umwelt, Naturschutz, Bau und Reaktorsicherheit vom 18.06.2015, Az.: RS II 4 – 15174, sowie den Anforderungen der Richtlinie Strahlenschutz in der Medizin