

Module Nuclear Imaging

Module Name: Nuclear Imaging

Module Number		Level	Master	Short Name	NI
Responsible Lecturers	Prof. Dr. rer. nat. Magdalena Rafecas				
Department, Facility	UzL, Institute of Medical Engineering				
Course of Studies	Biomedical Engineering, Master				
Compulsory/elective	Elective	ECTS Credit Points	3		
Semester of Studies	2	Semester Hours per Week	2		
Length (semesters)	1	Workload (hours)	60		
Frequency	SuSe	Presence Hours	25		
Teaching Language	English	Self-Study Hours	35		
Consideration of Gender and Diversity Issues	<input checked="" type="checkbox"/> Use of gender-neutral language (THL standard) <input type="checkbox"/> Target group specific adjustment of didactic methods <input type="checkbox"/> Making subject diversity visible (female researchers, cultures etc.)				
Applicability	Biomedical Engineering				
Remarks	None				

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Course 1: Nuclear Imaging Lecture

Course Number		Short Name	NI
Course Type	Lecture	Form of Learning	Presence
Mandatory Attendance	<input type="checkbox"/>	ECTS Credit Points	3
Participation Limit	16	Semester Hours per Week	2
Group Size (practical training, exercises, ...)	None	Workload (hours)	60
Teaching Language	English	Presence Hours	25
Study Achievements („Studienleistung“, SL)	None	Self-Study Hours	35
SL Length (minutes)	n. a.	SL Grading System	n. a.
Exam Type	Written Exam or oral exam	Exam Language	English
Exam Length (minutes)	90 or 20	Exam Grading System	One-third Grades
Learning Outcomes			
Participation Prerequisites	None		
Contents	<ul style="list-style-type: none"> • Physical, biological and medical basics of nuclear imaging • Scintigraphy • Positron emission tomography (PET) • Single photon emission computed tomography (SPECT) • Clinical and preclinical applications 		
Literature	<ul style="list-style-type: none"> • S. R. Cherry, J. A. Sorenson, M. E. Phelps: Physics in Nuclear Medicine - Elsevier, 2012 • M. N. Wernick, J. N. Aarsvold: Emission Tomography: The Fundamentals of PET and SPECT - Elsevier, 2004 • D. L. Bailey, D. W. Townsend, P. E. Valk , M N. Maisey (Editors): Positron Emission Tomography: Basic Sciences - Springer, 2005 		
Remarks	None		