Registration:

	Course fee		Please select
	Attendance option	EUR plus 19% VAT	\Downarrow
	"MR Safety Expert" 14,15,16 Mar 2024 physicists / physicians (Lectures & MRI hands-on):	1,690	
	"MR Safety Expert" 14,15,16 Mar 2024 technologists / radiographers (Lectures & MRI hands-on):	1,390	
	Online	20% off	
Ti	tle, First name, Name		
Fι	unction title		
Ω	rganization		
	g		
St	reet, Number		
Ci	ty, Zip-code		
T	elephone, Fax		
16	лернопе, гал		
Er	nail		
La	and / Country		
Da	ate, Signature		

Please send your registration to: MRI-STaR Fax: +49 209 149 77 30 88

Email: seminar@mri-star.com

We would be pleased to welcome you as attendee!

Information:

Terms of payment:

The amount is due for payment 2 weeks after receipt of the invoice. The course fee must be paid via wire transfer, check or via credit card. Information is provided in separate invoice. Credit card information please provide here via fax:

⊔ Visa ⊔ Ma Credit card #	sterCard	⊔ AMEX	
			Name o
card holder _ valid until date			

Students qualify for a 20% discount. Please send in a copy of an appropriate certificate proving your status.

Every 2nd and further registrant from the same organization applies for a 15% discount.

*only 1 discount applicable

Discounts:

Registration is valid only with receipt of confirmation and payment of the course fee. Early booking deadline: 4 weeks before seminar date.

A cancellation is free of charge up to 6 weeks before the seminar date. After that date we charge 50% of the registration fee. For a cancellation within the last 7 days 80% are charged of the course fee. If the cancellation takes place later or the participant or a backup does not attend in the course, we are entitled to deduct the full participation fee.

The course fees include: MRI-STaR certified MRSE exam, certificate, script, confirmation of participation, breakfast snack, lunch, dinner, hot and cold drinks.

The number of participants is limited. The places will be assigned in sequence of the receipt of registrations. MRI-STaR reserves the right to offer an alternative seminar date, if the number of participants is too low or too high.

SEMINAR LOCATION:

MRI-STaR GmbH Conference room Buschgrundstr. 23 45894 Gelsenkirchen, Germany



on-site & online Hands-on MR Seminar

Seminar location

MRI-STaR GmbH Gelsenkirchen, Germany CEST TIME ZONE

The "MR Safety Expert" (MRSE)

acc. to ABMRS Syllabus, DIN 6876-1, OENORM 1125-1/2, Dutch/MHRA/RANZCR Guidelines

March 14-16, 2024

Organizer

MRI-STaR GmbH & MR:comp GmbH www.mri-star.com

This course prepares the attendee to sit for the MRSE exam!

09:15	09:30	Welcoming / Breakfast	
09:30	10:00	Introduction	
10:00	10:15	Virtual visit of the MR system	Kug
10:15	11:45	Basics of MR physics and technical aspects - Static mag. field, RF-Field, Gradient-field - MR system components - Refresh of the physical principle - Physics of MRI (spin, magnetization, MR signal) - MR image acquisition (RF pulse sequences, gradients, geometry, signal to noise and contrast, contrast agents) - MR Imaging techniques (fast imaging, Perfusion. Diffusion, Spectroscopy	Kug
11:45	12:00	Coffee break	
12:00	12:30	Safety instruction	Kug
12:30	12:40	Grab a coffee	
12:40	14:10	Significant hazards MRI II system-specific (MR safety, the MR system and the MR worker – IEC 60601-2-33) - General terms - Presentation of hazards - Technology of superconductivity and potential risks of cryogens; Laser	Bri
14:10	15:00		
15:00	16:30	MR safety and compatibility of medical devices (and items) I / Significant hazards MRI I item-specific - Interactions of items (incl. implants) within the MR environment (static magnetic field, switched gradient and RF field) - Current technical standards & guidance, MR testing methods	Sch
16:30	17:00	Coffee break/Transfer to scanner	
17:00	18:45	Hands-on: Behavioral measures in possible emergency situations for medical personnel, firefighters and for technical staff - General behavior when entering the scanner room - Safety provisions for the MR environment - Magnetic emergency - Electricity failure and fire	Kug
		Final discussion with snack	

MRSE MRI-STAR Seminar Day 2:			
08:45	09:00	Breakfast	
09:00	10:00	Significant hazards MRI IV - Contrast agents	Otto
10:00	10:15	Coffee break	
10:15	11:45	Significant hazards MRI III patient- specific - Risks with respect to the static magnetic field - RF field and gradient field - Examples from clinical practice	Kug
11:45	12:00	Grab a Coffee	
12:00	13:30	Behavioral measures in MR routine I - Access control to the scanner room - Patient positioning	Kug
13:30	14:30	Lunch break	
14:30	15:45	Laws, regulations and clinical standards for MR operators - Employee protection - Responsibilities	Sch
15:45	16:30	Coffee break/Transfer to scanner	
16:30	18:30	Hands-on: Practical demonstrations and exercises - Patient positioning - Medical emergency - Emergency exercises	Kug
18:30	Open end	Discussion / Get together dinner	

Target audience:

The seminar is especially designed for the MR physicists, technologists/radiographers, MR clinicians.

The seminar language is English. The MR user will learn about MR safety regulations, standards, measures inside the MR environment. The user will be elevated to be able to organize the MR environment as MR safety responsible expert using the MR safety measures, know-how about SOPs and organization of processes for patients, MR workers and volunteers or other individuals.

Program is Subject to changes

MRSE		MRI-STAR	Seminar Day 3:
3:45	Brea	kfast	

08:30	08:45	Breakfast	
08:45	10:00	MR safety and compatibility of medical devices (and items) II - Finding the "worst-case" - Labeling of devices for the MR environment	Sch
10:00	10:15	Coffee break	
10:15	11:15	Hands-on: Behavioral measures in MR routine II (Implant labeling research) - Implant research - case studies	Sch
11:15	11:30	Coffee break	
11:30	12:40	Behavioral measures in MR routine III - Servicing and cleaning operations - Documentation (training, accidents)	Kug
12:40	13:20	MRI-STAR Certificate Examination (Multiple-Choice-Test) for free;	
		Optional: ABMRS additional examination on official MRSE exam date	
13:20	13:40	Final discussion/Farewell	

Lecturers:

Dr. rer. nat. H. Kugel

University Clinic for Radiology, University of Munster, Germany

J. van den Brink, Ph.D.

Principal Scientist & Architect, Philips MRI, Best, The Netherlands

Prof. H. Otto

Radiologist, Marien Hospital, Gelsenkirchen, Germany

Dipl.-Ing. (FH) G. Schaefers

MR Safety Testing Laboratory, MR:comp GmbH, Gelsenkirchen, Germany

*The seminar will be held together with the separate course Medical Device MR Safety Specialist (MRSS)" for industry participants (est. in 2007).