



Institute for Experimental and Translational
Cardio Vascular Imaging
University Hospital Frankfurt



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Abteilung für experimentelle und translationale kardiovaskuläre Bildgebung

DZHK Zentrum für Kardiovaskuläre Bildgebung - Goethe CVI

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Curriculum: Cardiovascular Imaging for Doktorarbeit students

The DA Programme is delivered in English.

Learning objectives (over the course of DA programme):

1. To obtain the insight into the state of art of cardiovascular imaging in clinical routine
2. To understand the underlying aims behind the development of novel imaging methods
3. To obtain clinical research skills, including, clinical study design and conduct, principles of good clinical practice in translational and clinical imaging research
4. data collection and evaluation, summarisation of results
5. To take part in scientific dissemination, including abstract/paper preparation, submission
6. To obtain experience of public speaking and presentation skills at a scientific conference

Programme:

1. Introduction into the module and course
2. Principles of image generation, acquisition and post-processing
3. Basis of cardiovascular morphology and pathophysiology
4. Review of the current state of art of cardiovascular imaging in clinical routine (2-day course)
5. Introduction into the research methods are relevant to imaging in clinical management (case-control studies, prospective longitudinal observational studies, clinical trials)
6. Overview of statistical methods applicable to Cardiovascular Imaging (Bland-Altman, Student t-test, one way ANOVA, non-parametric equivalents, predictive models) with introduction into SPSS.
7. The project: designing the project, data collection, data cleaning and mining, analysis, summary of results
8. Conference abstract preparation, submission and presentation
9. Paper preparation and submission.
10. Critical appraisal of published literature on imaging research techniques and findings