

Advanced MRI: Spring 2025

Time and Location:

Tuesday AM 9:10~12:00 @ EC8037

Instructor:

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Prerequisites:

基礎磁共振造影技術(Necessary)、數位影像處理(Optional)

Schedule:

2/18	Introduction
2/25	Bloch's Equations Simulation
3/4	Echoes: Pathway and Signal Formation
3/11	MR Relaxometry Methods: The Basic Ones
3/18	MR Relaxometry Methods: Those with Gradient Echoes
3/25	MR Relaxometry Methods: Hybrid ones
4/1	Advanced GRE: bSSFP
4/8	Advanced GRE: bSSFP and SSFP signal profile
4/15	Advanced GRE: DESS
4/22	Advanced GRE: SWI
4/29	MR Contrast Agent and Contrast-enhanced MRI

5/6	MR Angiography
5/13	Phase-contrast MRI
5/20	Diffusion MRI
5/27	Diffusion Tensor and Anisotropy
6/3	Fiber Tractography

Grading:

In-class activities or take-home assignments 100%