MDPH 704. COMPUTATIONAL METHODS IN RADIOTHERAPY AND IMAGING.

Credits: 3

Offered by: Medical Physics Unit (Graduate Studies)

Terms offered: Fall 2025, Winter 2026

View offerings for Fall 2025 or Winter 2026 in Visual Schedule Builder.

Description

An overview of advanced computational tools and methods in medical physics, both in radiation therapy and imaging. Learning objectives of the course are familiarity with data structures and algorithms, numerical analysis techniques, deterministic approaches, stochastic approaches, optimization methods, statistical testing, familiarity with software tools, concepts and languages used in scientific computing, libraries used in scientific computing, Monte Carlo software used in medical physics, software development environments, productivity tools, advanced techniques in computational medical physics and relational databases and statistical analysis.

- Restrictions: Only open to students with an M.Sc. in Medical Physics and students that are currently registered in the Ph.D. in Physics program.