New Course Proposal: BMB 602: Imaging Biomarkers

Course description: Introduction to principles of imaging based biomarkers for studying metabolic and functional integrity of biological tissues in vivo. Topics covered include, a general overview of multimodal imaging biomarkers and a special emphasis on theoretical and practical aspects of MRI biomarkers based on magnetic resonance relaxation, chemical exchange, and metabolic spectroscopy as well as functional responses and their applications in diagnostic imaging of different diseases.

Course format: lectures

Activity type: Lectures and labs

Participating faculty and their roles:
  Course director: Ravinder Reddy, Ph.D.;
  Associated faculty: Ari Borthakur, Ph.D., Mark Elliott, Ph.D., Hari Hariharan, Ph.D.

Proposed semester and days of week: Spring semester, every other year, first half of semester Tu/Th (time to be determined).

Course unit value: 1/2 credit

Total contact hours: ~ 3 per week

Prerequisites: BMB 601 or permission of the course director

Students the course is expected to attract: First and second year BMB and Bioengineering graduate students

Enrollment limit: up to 20 students. Those with prior NMR and MRI background will be given priority

Course materials: lecture notes, ppt slides, reference books

Evaluation of student performance: Homework and presentations