

NSCI-403
INTRODUCTION TO NEUROIMAGING
WINTER TERM 2021

COURSE COORDINATOR

Dr. Patrick W. Stroman
Email: stromanp@queensu.ca
Phone: 613-533-3245

INSTRUCTOR

Dr. Patrick Stroman

TEXTBOOK

There is no formal textbook for this course. Information to support the course material will be obtained from various freely available on-line sources. Copies of a text book on MRI theory and functional MRI will be available in Bracken Library ("Essentials of Functional MRI", by P. Stroman). Course materials in the form of PowerPoint slides for each lecture will also be provided.

EVALUATION

Mid-term examination	1/3 of grade
Final examination	1/3 of grade
Term project (written paper)	1/3 of grade

REVIEW AND APPEAL OF GRADES

Students have the right to review their final examination papers.

For this purpose, final examination paper means the final examination question paper in a course and the graded answer paper written by the student, which by Senate policy, must be retained for a period of 12 months.

As a first step (and noting the time limitation), the student should request an informal review with the instructor.

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Lectures – Winter 2021

Lecture materials will be provided in the form of videos. The dates in the table below indicate the approximate dates for keeping up with lectures, but students will proceed at their own pace.

There will be no fixed class times, but days/times each week for discussions over Zoom will be determined early in the term by polling the students for their preferences. Zoom meetings will be recorded for those unable to attend.

Students will also be able to email questions to the instructor, and the answers will be posted online, with the intention of this being a searchable database so that all students can find previous questions, search answers etc.

As this is a new approach, the exact format and dates will be revised as needed.

Approximate DATES*		Lecture TOPIC
Tuesday	Jan. 8	Introduction to basic imaging concepts
Thursday	Jan. 10	CT
Tuesday	Jan. 15	PET/SPECT
Thursday	Jan. 17	MRI
Tuesday	Jan. 22	MRI
Thursday	Jan. 24	MRI
Tuesday	Jan. 29	Anatomical imaging concepts
Thursday	Jan. 31	Anatomical imaging concepts
Tuesday	Feb. 5	Anatomical imaging applications
Thursday	Feb. 7	Anatomical imaging applications
Tuesday	Feb. 12	Functional imaging concepts
Thursday	Feb. 14	Functional imaging concepts
February 18-21		READING WEEK
Tuesday	Feb. 26	Review session
Thursday	Feb. 28	Mid-term exam
Tuesday	Mar. 5	Why MRI for functional imaging?
Thursday	Mar. 7	fMRI data acquisition
Tuesday	Mar. 12	fMRI data acquisition
Thursday	Mar. 14	fMRI data analysis
Tuesday	Mar. 19	fMRI data analysis
Thursday	Mar. 21	fMRI study design
Tuesday	Mar. 26	fMRI study design
Thursday	Mar. 28	fMRI study design
Tuesday	Apr. 2	Examples of applications of structural and functional neuroimaging
Thursday	Apr. 4	Examples of applications of structural and functional neuroimaging
T.B.A.		FINAL EXAMINATION