

**NSCI-403**  
**INTRODUCTION TO NEUROIMAGING**  
**WINTER TERM 2026**

**COURSE COORDINATOR**

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**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	$\frac{1}{3}$ of grade
Final examination	$\frac{1}{3}$ of grade
Term project (written paper)	$\frac{1}{3}$ 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.

## **NSCI-403**

### **INTRODUCTION TO NEUROIMAGING**

#### **Lectures – Winter 2026**

Lecture materials will be provided in the form of PowerPoint slides. The dates in the table below indicate the approximate dates for keeping up with lectures, but the actual schedule may vary.

Classes will be held in-person, with three one-hour classes per week in Miller Hall room 201. Classes will be Tuesday 12:30-13:30, Thursday 11:30-12:30, Friday 13:30-14:30, starting January 5<sup>th</sup> 2026.

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.

Approximate DATES*	Lectures	Lecture TOPIC
Week 1 Jan 5	1, 2, 3	Introduction to basic imaging concepts, start on CT
Week 2 Jan 12	4, 5, 6	Ways and image can be created, CT concepts
Week 3 Jan 19	7, 8, 9	PET and SPECT concepts, start on MRI concepts
Week 4 Jan 26	10, 11, 12	MRI concepts, Anatomical imaging concepts
Week 5 Feb 2	13, 14, 15	Anatomical imaging concepts, and examples of applications
Week 6 Feb 9	16	Finish anatomical imaging concepts, review session in class, in-class midterm exam
Week 7 Feb 16		READING WEEK
Week 8 Feb 23	17, 18, 19	Functional imaging concepts
Week 9 March 2	20, 21, 22	fMRI data acquisition
Week 10 March 9	23, 24, 25	fMRI data analysis
Week 11 March 16	26, 27, 28	fMRI study design
Week 12 March 23	29, 30, 31	Examples of applications
Week 13 March 30	32, 33	Examples of applications, and review session
T.B.D.		FINAL EXAMINATION