

ANAT 321
Circuitry of the Human Brain
fall, 2022

Instructor: David Ragsdale
Office: Rm 744, Montreal Neurological Institute
Email: david.ragsdale@mcgill.ca

Course Content

This course examines how the organization and function of our brains enable us to perceive, move and think. The class comprises lectures and readings. The lectures are Mondays, Wednesdays, and Fridays, from 10:35 – 11:25 AM in Stewart S1/4. All lectures are recorded and posted on mycourses.

Lecture Schedule

| Date | Topic |
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| Aug 31 | Introduction to Neuroanatomy |
| Sept 2 | Introduction to Sensory Systems (Reading 1) |
| Sept 5 | Labor Day, no class |
| Sept 7 | Sensory systems |
| Sept 9 | Spinal cord |
| Sept 12 | Spinal cord |
| Sept 14 | Brainstem (Reading 2) |
| Sept 16 | No class |
| Sept 19 | Brainstem/thalamus |
| Sept 21 | Thalamus (Reading 3) |
| Sept 23 | Cerebral cortex (Reading 4, part 1) |
| Sept 26 | Cerebral cortex |
| Sept 28 | Cerebral cortex |
| Sept 30 | Cerebral cortex |
| Oct 3 | Provincial election, no class |
| Oct 5 | Cerebral cortex (Reading 4, part 2) |
| Oct 7 | Visual system |
| Oct 10 | Thanksgiving (no class) |
| Oct 12 | Fall reading break (no class) |
| Oct 13 | Visual System (Thursday class) |
| Oct 17 | Visual System |
| Oct 19 | Midterm review |
| Oct 19 | Midterm exam (6:30 – 8:30 PM) |
| Oct 21 | Visual system (Reading 5) |
| Oct 24 | Visual system |
| Oct 26 | Motor systems |

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| Oct 28 | Motor systems |
| Oct 31 | Motor systems |
| Nov 2 | Basal ganglia |
| Nov 4 | Basal ganglia (Reading 6) |
| Nov 7 | Cerebellum |
| Nov 9 | Cerebellum |
| Nov 11 | Executive function, feelings, emotions, and decision-making |
| Nov 14 | Executive function (Reading 7) |
| Nov 16 | Executive function |
| Nov 18 | Executive function |
| Nov 21 | Executive function |
| Nov 23 | Learning and memory |
| Nov 25 | Learning and memory |
| Nov 28 | Blood flow and meninges |
| Nov 30 | Video: dissecting a human brain |
| Dec 2 | Neuroscience of consciousness and conscious will (Reading 8) |
| Dec 5 | Final exam review |

Readings

There are eight readings spread out over the course of the semester. They are available on mycourses. The readings assume that you have covered a certain amount of material in the course, so it's best to do them around the times indicated in course outline.

Evaluation

Grades will be based on a midterm and a final. Both the midterm and the final are multiple choice. Both will be in person unless there is a change in the University COVID policy.

Midterm: 40%, Oct 19, 2:35 – 3:25 PM

Final exam: 60%, TBA

Language of Submission

“In accord with McGill University’s [Charter of Student Rights](#), students in this course have the right to submit in English or in French any written work that is to be graded. This does not apply to courses in which acquiring proficiency in a language is one of the objectives.” (Approved by Senate on 21 January 2009)

« Conformément à [la Charte des droits de l’étudiant](#) de l’Université McGill, chaque étudiant a le droit de soumettre en français ou en anglais tout travail écrit devant être noté, sauf dans le cas des cours dont l’un des objets est la maîtrise d’une langue. »

Academic Integrity

“McGill University values academic integrity. Therefore, all students must understand the meaning and consequences of cheating, plagiarism and other academic offences under the [Code of Student Conduct and Disciplinary Procedures](#).” (Approved by Senate on 29 January 2003) (See McGill’s [guide to academic honesty](#) for more information.)

« L'université McGill attache une haute importance à l'honnêteté académique. Il incombe par conséquent à tous les étudiants de comprendre ce que l'on entend par tricherie, plagiat et autres infractions académiques, ainsi que les conséquences que peuvent avoir de telles actions, selon le Code de conduite de l'étudiant et des procédures disciplinaires (pour de plus amples renseignements, veuillez consulter le [guide pour l'honnêteté académique de McGill](#).)»
