

math133

linear algebra and geometry

course outline, summer 2023

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course website math.mcgill.ca/alapierre/math133_s23

Most of the communication will happen by email or through the course website. Make sure to check it weekly for updates!

overview

The official course overview from the math department is the following :

" Systems of linear equations, matrices, inverses, determinants; geometric vectors in three dimensions, dot product, cross product, lines and planes; introduction to vector spaces, linear dependence and independence, bases. Linear transformations. Eigenvalues and diagonalization. "

We will not proceed in the previous order when presenting topics.

schedule

course
schedule mtwr 08h35 - 10h55
room Trottier (engtr) room 0100

tutorial
schedule mw 13h05 - 13h55
room Stewart biology (stbio) room s1/3

evaluations

There will be 3 quizzes (1 hour), one midterm (2 hours) and one final exam (3 hours). The corresponding weights will be the following :

quizzes (3) 4% each
midterm 34%
final exam 54%

Note that students attempting the quizzes automatically get full marks.

calendar

key academic dates

classes begin	may 1
withdrawal with refund	may 4
withdrawal without refund	may 15
fête des patriotes (holiday)	may 22
classes end	june 1

evaluations

quizzes	may 4, 11, 25
midterm	may 18
final	tbd (may 31 or june 1)

references

[Ax15] Sheldon Axler. *Linear algebra done right*. Springer, 2015.

[Nic21] W Keith Nicholson. *Linear algebra with applications*. Lyryx Learning Inc., 2021.

The topics presented will mostly follow chapters 1,2,3,5 and 10 from Axler's book [Ax15] with an emphasis on examples. The book by Nicholson [Nic21] is available online for free on the following webpage :

<https://lyryx.com/linear-algebra-applications/>

The book by Axler can be downloaded via the library's website.

policies

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."

« 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. »

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."

« 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. »

covid-19 regulations and accomodations

If you are diagnosed with covid-19 and it impacts your ability to take exams, you are asked to contact the Dean of Students for formal procedures. You can also contact me as I will try my best to be lenient.