

Dynamic Schedule: Visit [Minerva Class Schedule](#)https://horizon.mcgill.ca/pban1/bwckschd.p_disp_dyn_sched for course dates & times.McGill.ca (<https://www.mcgill.ca>) / Overview (/study/2022-2023/) / All Courses (/study/2022-2023/courses/search)

MATH 523 Generalized Linear Models (4 credits)

Offered by: Mathematics and Statistics ([Faculty of Science \(/study/2022-2023/faculties/science/\)](#))

Overview

Mathematics & Statistics (Sci) : Exponential families, link functions. Inference and parameter estimation for generalized linear models; model selection using analysis of deviance. Residuals. Contingency table analysis, logistic regression, multinomial regression, Poisson regression, log-linear models. Multinomial models. Overdispersion and Quasilikelihood. Applications to experimental and observational data.

Terms: Winter 2023

Instructors: Chatelain, Simon (Winter)

- Winter
- Prerequisite: [MATH 423 \(/study/2022-2023/courses/math-423\)](#) or [MATH 533 \(/study/2022-2023/courses/math-533\)](#) or [EPIB 697 \(/study/2022-2023/courses/epib-697\)](#).

This course may be used as a required or complementary course in the following programs:

[Bachelor of Arts \(B.A.\) - Major Concentration Mathematics \(/https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-major-concentration-mathematics\)](#)

[Bachelor of Arts \(B.A.\) - Major Concentration Mathematics \(/https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-major-concentration-mathematics\)](#)

[Bachelor of Arts \(B.A.\) - Major Concentration Statistics \(/https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics\)](#)

[Bachelor of Arts \(B.A.\) - Major Concentration Statistics \(/https://www.mcgill.ca/study/2022-2023-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics\)](#)

[2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics))

[Bachelor of Arts \(B.A.\) - Minor Concentration Statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-major-concentration-statistics)

[2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics))

[Bachelor of Arts \(B.A.\) - Minor Concentration Statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics)

[2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-minor-concentration-statistics))

[Bachelor of Arts \(B.A.\) - Supplementary Minor Concentration in Mathematics](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-mathematics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-mathematics)

[2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-mathematics](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-mathematics))

[Bachelor of Arts \(B.A.\) - Supplementary Minor Concentration Statistics](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics)

[2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics](https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics))

[Bachelor of Arts \(B.A.\) - Supplementary Minor Concentration Statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics)

[2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics](https://www.mcgill.ca/study/2022-2023/faculties/basc/undergraduate/programs/bachelor-arts-ba-supplementary-minor-concentration-statistics))

[Bachelor of Education \(B.Ed.\) - Secondary Mathematics](https://www.mcgill.ca/study/2022-2023/faculties/education/undergraduate/programs/bachelor-education-bed-secondary-mathematics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/education/undergraduate/programs/bachelor-education-bed-secondary-mathematics)

[2023/faculties/education/undergraduate/programs/bachelor-education-bed-secondary-mathematics](https://www.mcgill.ca/study/2022-2023/faculties/education/undergraduate/programs/bachelor-education-bed-secondary-mathematics))

[Bachelor of Science \(B.Sc.\) - Honours Probability and Statistics](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-honours-probability-and-statistics)
([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-honours-probability-and-statistics)

[2023/faculties/science/undergraduate/programs/bachelor-](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-honours-probability-and-statistics)

[science-bsc-honours-
probability-and-statistics](#))

[Bachelor of Science \(B.Sc.\) -
Honours Probability and
Statistics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/arts/undergraduate/programs/bachelor-science-bsc-honours-probability-and-statistics>)

[Bachelor of Science \(B.Sc.\) -
Honours Statistics and
Computer Science](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-honours-statistics-and-computer-science>)

[Bachelor of Science \(B.Sc.\) -
Liberal Program - Core
Science Component
Mathematics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-liberal-program-core-science-component-mathematics>)

[Bachelor of Science \(B.Sc.\) -
Liberal Program - Core
Science Component Statistics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-liberal-program-core-science-component-statistics>)

[Bachelor of Science \(B.Sc.\) -
Major Biology and
Mathematics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-biology-and-mathematics>)

[Bachelor of Science \(B.Sc.\) -
Major Mathematics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-mathematics>)

[Bachelor of Science \(B.Sc.\) -
Major Statistics](#)
(<https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics>)

[2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics))

[Bachelor of Science \(B.Sc.\) - Major Statistics and Computer Science](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics-and-computer-science)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics-and-computer-science)

[2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics-and-computer-science](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-statistics-and-computer-science))

[Bachelor of Science \(B.Sc.\) - Minor Statistics](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics)

[2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics](https://www.mcgill.ca/study/2022-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-minor-statistics))

[Doctor of Philosophy \(Ph.D.\) Biostatistics](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/doctor-philosophy-phd-biostatistics)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/doctor-philosophy-phd-biostatistics)

[2023/faculties/medicine/graduate/programs/doctor-philosophy-phd-biostatistics](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/doctor-philosophy-phd-biostatistics))

[Doctor of Philosophy \(Ph.D.\) Quantitative Life Sciences](https://www.mcgill.ca/study/2022-2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences)

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[Doctor of Philosophy \(Ph.D.\) Quantitative Life Sciences](https://www.mcgill.ca/study/2022-2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences)

[2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences](https://www.mcgill.ca/study/2022-2023/faculties/interfaculty/graduate/programs/doctor-philosophy-phd-quantitative-life-sciences))

[Master of Science \(M.Sc.\) Biostatistics \(Non-Thesis\)](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-non-thesis)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-non-thesis)

[2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-non-thesis](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-non-thesis))

[Master of Science \(M.Sc.\) Biostatistics \(Thesis\)](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-thesis)

([https://www.mcgill.ca/study/2022-](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-thesis)

[2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-thesis](https://www.mcgill.ca/study/2022-2023/faculties/medicine/graduate/programs/master-science-msc-biostatistics-thesis))




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