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## eCalendar (/study/2022-2023/) Programs, Courses & University Regulations Fall 2022-

Search

**Entire Site** 

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 222 Calculus 3 (3 credits)

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

## Overview

Mathematics & Statistics (Sci): Taylor series, Taylor's theorem in one and several variables. Review of vector geometry. Partial differentiation, directional derivative. Extreme of functions of 2 or 3 variables. Parametric curves and arc length. Polar and spherical coordinates. Multiple integrals.

Terms: Fall 2022, Winter 2023, Summer 2023

Instructors: Paquette, Elliot; Wrobel, Konrad (Fall) Trudeau, Sidney (Winter)

- Prerequisite: MATH 141 (/study/2022-2023/courses/math-141). Familiarity with vector geometry or Corequisite: MATH 133 (/study/2022-2023/courses/math-133)
- Restriction: Not open to students who have taken MATH 150 (/study/2022-2023/courses/math-150), MATH 151 (/study/2022-2023/courses/math-151) or MATH 262 (/study/2022-2023/courses/math-262).

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

Bachelor of Arts (B.A.) - Joint Honours Component Mathematics (https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-joint-honours-componentmathematics)

Bachelor of Arts (B.A.) - Joint
Honours Component
Mathematics
(https://www.mcgill.ca/study/20
222023/faculties/basc/undergrad

uate/programs/bachelor-artsba-joint-honours-componentmathematics)

Bachelor of Arts (B.A.) - Major Concentration Computer Science

(https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-major-concentrationcomputer-science)

Bachelor of Arts (B.A.) - Major
Concentration Computer
Science
(https://www.mcgill.ca/study/20
222023/faculties/basc/undergrad
uate/programs/bachelor-artsba-major-concentrationcomputer-science)

Concentration Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu ate/programs/bachelor-arts-ba-major-concentration-mathematics)

Bachelor of Arts (B.A.) - Major

Bachelor of Arts (B.A.) - Major Concentration Mathematics (https://www.mcgill.ca/study/20 22-

2023/faculties/basc/undergrad uate/programs/bachelor-artsba-major-concentrationmathematics)

Bachelor of Arts (B.A.) - Major Concentration Statistics (https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu ate/programs/bachelor-artsba-major-concentrationstatistics)

Bachelor of Arts (B.A.) - Major Concentration Statistics (https://www.mcgill.ca/study/20 22-2023/faculties/basc/undergrad

2023/faculties/basc/undergrad uate/programs/bachelor-artsba-major-concentrationstatistics)

Bachelor of Arts (B.A.) - Minor Concentration Mathematics (https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-minor-concentrationmathematics)

Bachelor of Arts (B.A.) - Minor Concentration Mathematics (https://www.mcgill.ca/study/20 22-

2023/faculties/basc/undergrad uate/programs/bachelor-artsba-minor-concentrationmathematics)

Bachelor of Arts (B.A.) - Minor Concentration Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu

ate/programs/bachelor-arts-

<u>ba-minor-concentration-</u> <u>mathematics)</u>

Concentration Mathematics
(https://www.mcgill.ca/study/20
222023/faculties/basc/undergrad
uate/programs/bachelor-artsba-minor-concentration-

Bachelor of Arts (B.A.) - Minor

mathematics)

Bachelor of Arts (B.A.) - Minor
Concentration Science for Arts
Students

(https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-minor-concentrationscience-arts-students)

Bachelor of Arts (B.A.) - Minor Concentration Science for Arts Students

(https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-minor-concentrationscience-arts-students)

Bachelor of Arts (B.A.) - Minor Concentration Statistics (https://www.mcgill.ca/study/20 22-

2023/faculties/arts/undergradu ate/programs/bachelor-artsba-minor-concentrationstatistics)

Bachelor of Arts (B.A.) - Minor Concentration Statistics (https://www.mcgill.ca/study/20 22-

2023/faculties/basc/undergrad uate/programs/bachelor-artsba-minor-concentrationstatistics)

Bachelor of Arts and Science
(B.A. & Sc.) - Honours
Cognitive Science
(https://www.mcgill.ca/study/20
22-

2023/faculties/basc/undergrad uate/programs/bachelor-artsand-science-ba-sc-honourscognitive-science)

Bachelor of Arts and Science
(B.A. & Sc.) - Interfaculty
Program Cognitive Science
(https://www.mcgill.ca/study/20
222023/faculties/basc/undergrad
uate/programs/bachelor-artsand-science-ba-sc-interfacultyprogram-cognitive-science)

Bachelor of Arts and Science
(B.A. & Sc.) - Major
Concentration Physics
(https://www.mcgill.ca/study/20
222023/faculties/basc/undergrad
uate/programs/bachelor-artsand-science-ba-sc-majorconcentration-physics)

Bachelor of Commerce
(B.Com.) - Major
Concentration Mathematics for
Management Students
(https://www.mcgill.ca/study/20
222023/faculties/desautels/under
graduate/programs/bachelorcommerce-bcom-majorconcentration-mathematicsmanagement-students)

Bachelor of Education (B.Ed.)
- Secondary Mathematics
(https://www.mcgill.ca/study/20
222023/faculties/education/under
graduate/programs/bacheloreducation-bed-secondarymathematics)

Bachelor of Education (B.Ed.)
- Secondary Science and
Technology
(https://www.mcgill.ca/study/20
222023/faculties/education/under
graduate/programs/bacheloreducation-bed-secondaryscience-and-technology)

Bachelor of Science
(Agricultural and
Environmental Sciences)
(B.Sc.(Ag.Env.Sc.)) or
Bachelor of Science (B.Sc.) Major Environment - Water
Environments and
Ecosystems - Physical
(https://www.mcgill.ca/study/20
222023/faculties/macdonald/und
ergraduate/programs/bachelor
-science-agricultural-andenvironmental-sciencesbscagenvsc-or-bachelorscience-bsc-major-7)

Bachelor of Science
(Agricultural and
Environmental Sciences)
(B.Sc.(Ag.Env.Sc.)) or
Bachelor of Science (B.Sc.) Major Environment - Water
Environments and
Ecosystems - Physical
(https://www.mcgill.ca/study/20
222023/faculties/environment/un

dergraduate/programs/bachelo r-science-agricultural-andenvironmental-sciencesbscagenvsc-or-bachelorscience-bsc-major-7)

Bachelor of Science (B.Sc.) -Honours Applied Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honours-appliedmathematics)

Bachelor of Science (B.Sc.) -Honours Applied Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu ate/programs/bachelorscience-bsc-honours-appliedmathematics)

Bachelor of Science (B.Sc.) -Honours Atmospheric Science (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr

2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursatmospheric-science)

Bachelor of Science (B.Sc.) -Honours Biochemistry (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursbiochemistry)

Bachelor of Science (B.Sc.) -Honours Biology - Quantitative Biology (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honours-biologyquantitative-biology)

Bachelor of Science (B.Sc.) -Honours Chemistry (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honourschemistry)

Bachelor of Science (B.Sc.) Honours Chemistry - Bioorganic
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-honourschemistry-bio-organic)

Bachelor of Science (B.Sc.) -Honours Chemistry:
Biophysical Chemistry
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honourschemistry-biophysicalchemistry)

Bachelor of Science (B.Sc.) -Honours Computer Science (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honourscomputer-science)

Bachelor of Science (B.Sc.) -

Honours Computer Science
and Biology
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-honourscomputer-science-andbiology).

Bachelor of Science (B.Sc.) Honours Earth System
Science
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-honours-earthsystem-science)

Bachelor of Science (B.Sc.) -Honours Geology (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honours-geology)

Bachelor of Science (B.Sc.) -Honours Immunology (Interdepartmental) (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursimmunologyinterdepartmental)

Bachelor of Science (B.Sc.) -Honours Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursmathematics)

Bachelor of Science (B.Sc.) -Honours Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu ate/programs/bachelorscience-bsc-honoursmathematics)

Bachelor of Science (B.Sc.) -Honours Mathematics and Computer Science (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursmathematics-and-computerscience)

Honours Mathematics and
Computer Science
(https://www.mcgill.ca/study/20
222023/faculties/arts/undergradu
ate/programs/bachelorscience-bsc-honoursmathematics-and-computerscience)

Bachelor of Science (B.Sc.) -

Bachelor of Science (B.Sc.) -Honours Neuroscience (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursneuroscience)

Bachelor of Science (B.Sc.) -Honours Physics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honours-physics)

Bachelor of Science (B.Sc.) -Honours Planetary Sciences (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honoursplanetary-sciences)

Bachelor of Science (B.Sc.) Honours Probability and
Statistics
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-honoursprobability-and-statistics)

Bachelor of Science (B.Sc.) -Honours Probability and Statistics

(https://www.mcgill.ca/study/20 22-2023/faculties/arts/undergradu ate/programs/bachelorscience-bsc-honoursprobability-and-statistics)

Honours Software Engineering (https://www.mcgill.ca/study/20 22- 2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-honours-software-engineering)

Bachelor of Science (B.Sc.) -

Bachelor of Science (B.Sc.) Liberal Program - Core
Science Component
Atmospheric and Oceanic
Sciences
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentatmospheric-and-oceanicsciences)

Bachelor of Science (B.Sc.) Liberal Program - Core
Science Component
Biochemistry
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentbiochemistry)

Bachelor of Science (B.Sc.) Liberal Program - Core
Science Component
Chemistry - General
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentchemistry-general)

Bachelor of Science (B.Sc.) Liberal Program - Core
Science Component Computer
Science
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentcomputer-science)

Bachelor of Science (B.Sc.) -Liberal Program - Core Science Component Mathematics

(https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentmathematics)

Bachelor of Science (B.Sc.) -Liberal Program - Core Science Component Physics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentphysics)

Liberal Program - Core
Science Component Statistics
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-liberal-programcore-science-componentstatistics)

Bachelor of Science (B.Sc.) -

Bachelor of Science (B.Sc.) - Major Atmospheric Science (https://www.mcgill.ca/study/20 22- 2023/faculties/science/undergr aduate/programs/bachelor-science-bsc-major-atmospheric-science)

Bachelor of Science (B.Sc.) -Major Atmospheric Science and Physics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majoratmospheric-science-andphysics).

Bachelor of Science (B.Sc.) -Major Biochemistry (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majorbiochemistry)

Bachelor of Science (B.Sc.) Major Biology - Quantitative
Biology
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-major-biologyquantitative-biology)

Bachelor of Science (B.Sc.) -Major Biology and Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-biologyand-mathematics)

Bachelor of Science (B.Sc.) -Major Chemistry (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-chemistry)

Bachelor of Science (B.Sc.) -Major Chemistry - Bio-organic (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-chemistrybio-organic)

Bachelor of Science (B.Sc.) -Major Chemistry: Biophysical Chemistry (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-chemistrybiophysical-chemistry)

Bachelor of Science (B.Sc.) -Major Computer Science (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-computerscience)

Bachelor of Science (B.Sc.) Major Computer Science Computer Games
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-major-computerscience-computer-games)

Bachelor of Science (B.Sc.) Major Computer Science and
Biology
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-major-computerscience-and-biology)

Bachelor of Science (B.Sc.) -Major Earth System Science (https://www.mcgill.ca/study/20 22-

2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-earthsystem-science)

Bachelor of Science (B.Sc.) Major Environment Atmospheric Environment and
Air Quality
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-majorenvironment-atmosphericenvironment-and-air-quality)

Bachelor of Science (B.Sc.) Major Environment Atmospheric Environment and
Air Quality
(https://www.mcgill.ca/study/20
222023/faculties/environment/un
dergraduate/programs/bachelo
r-science-bsc-majorenvironment-atmosphericenvironment-and-air-quality.)

Bachelor of Science (B.Sc.) - Major Geology (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergraduate/programs/bachelor-science-bsc-major-geology)

Bachelor of Science (B.Sc.) -Major Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majormathematics)

Bachelor of Science (B.Sc.) -Major Mathematics and Computer Science (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majormathematics-and-computerscience)

Bachelor of Science (B.Sc.) -Major Neuroscience (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majorneuroscience)

Bachelor of Science (B.Sc.) -Major Neuroscience (https://www.mcgill.ca/study/20 22-

2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-majorneuroscience)

Bachelor of Science (B.Sc.) Major Physics

2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-physics)

(https://www.mcgill.ca/study/20

Bachelor of Science (B.Sc.) Major Physics and Computer
Science
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-major-physicsand-computer-science)

Bachelor of Science (B.Sc.) -Major Physics and Geophysics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelor-

science-bsc-major-physicsand-geophysics)

Bachelor of Science (B.Sc.) -

Major Physics: Biological Physics
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr aduate/programs/bachelor-science-bsc-major-physics-biological-physics)

Bachelor of Science (B.Sc.) -Major Physiology and Mathematics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-physiologyand-mathematics)

Bachelor of Science (B.Sc.) -Major Physiology and Physics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr

2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-physiologyand-physics).

Bachelor of Science (B.Sc.) -Major Software Engineering (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-major-software-

engineering)

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Bachelor of Science (B.Sc.) - Major Statistics (https://www.mcgill.ca/study/20 22- 2023/faculties/science/undergraduate/programs/bachelorscience-bsc-major-statistics)

Bachelor of Science (B.Sc.) Major Statistics and Computer
Science
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-major-statisticsand-computer-science)

Minor Mathematics
(https://www.mcgill.ca/study/20
222023/faculties/science/undergr
aduate/programs/bachelorscience-bsc-minormathematics)

Bachelor of Science (B.Sc.) -

Bachelor of Science (B.Sc.) -Minor Statistics (https://www.mcgill.ca/study/20 22-2023/faculties/science/undergr aduate/programs/bachelorscience-bsc-minor-statistics)



Visit *Minerva Class Schedule* for course dates & times

Class Schedule (https://horizon.mcgill.ca/pban1/bwckschd.p\_disp\_dyn\_sched