



### **MATHEMATICAL PREPARATION – MScPH ADMISSIONS**

- Adequate mathematical preparation for the MSc in Public Health program is often evaluated by assuring the applicant has successfully completed 6 credits of college-level calculus. For Quebec applicants, CEGEP calculus is the equivalent of university-level calculus.
- We also consider other statistical training as a measure of mathematical preparation and quantitative capacity. Therefore, for candidates without the equivalent of 6 McGill credits of calculus, other courses in mathematics and statistics will be considered, including the following courses at McGill

**MATH 203 - Principles of Statistics 1 (3 credits)** [www.mcgill.ca/study/2020-2021/courses/math-203](http://www.mcgill.ca/study/2020-2021/courses/math-203)

Examples of statistical data and the use of graphical means to summarize the data. Basic distributions arising in the natural and behavioural sciences. The logical meaning of a test of significance and a confidence interval. Tests of significance and confidence intervals in the one and two sample setting (means, variances and proportions).

**MATH 204 - Principles of Statistics 2 (3 credits)** [www.mcgill.ca/study/2020-2021/courses/math-204](http://www.mcgill.ca/study/2020-2021/courses/math-204)

The concept of degrees of freedom and the analysis of variability. Planning of experiments. Experimental designs. Polynomial and multiple regressions. Statistical computer packages (no previous computing experience is needed). General statistical procedures requiring few assumptions about the probability model.

**MATH 324 Statistics 3 Credits** [www.mcgill.ca/study/2020-2021/courses/math-324](http://www.mcgill.ca/study/2020-2021/courses/math-324)

Mathematics & Statistics (Sci): Sampling distributions, point and interval estimation, hypothesis testing, analysis of variance, contingency tables, nonparametric inference, regression, Bayesian inference.

**MATH 123 Linear Algebra and Probability (3 credits)** [www.mcgill.ca/study/2020-2021/courses/math-123](http://www.mcgill.ca/study/2020-2021/courses/math-123)

Mathematics & Statistics (Sci): Geometric vectors in low dimensions. Lines and planes. Dot and cross product. Linear equations and matrices. Matrix operations, properties and rank. Linear dependence and independence. Inverses and determinants. Linear programming and tableaux. Sample space, probability, combination of events. Conditional probability and Bayes Law. Random sampling. Random variables and common distributions.

**Note to Applicants:**

Review the topics covered in the courses listed above. If you have 2 university-level courses covering similar material, you are likely to meet our requirements.

If you would like us to consider courses other than calculus, we strongly recommend that you upload the course outlines for the courses you would like us to consider to uApply, as a “Quantitative Requirement Document”. For Quebec applicants, CEGEP transcripts with calculus grades should be uploaded here as well.