

# McGill University

## Department of Mathematics and Statistics

Accredited courses that may be used towards the A.Stat. designation

Module	Course	
<b>Mathematics Modules</b>		
<b>1. Calculus I</b>	Either of MATH 139 Calculus 1 with Precalculus or Math 140 Calculus 1, and MATH 141 Calculus 2 OR MATH 150 Calculus A	
<b>2. Calculus II</b>	MATH 151 Calculus B OR MATH 222 Calculus 3	
<b>3. Linear Algebra</b>	Either of MATH 223 Linear Algebra MATH 236 Algebra 2 MATH 247 Honours Applied Linear Algebra MATH 251 Honours Algebra 2	
<b>Statistics and probability modules</b>		
<b>4. Mathematical Statistics</b>	MATH 323 Probability and MATH 324 Statistics OR MATH 356 Honours Probability and MATH 357 Honours Statistics OR MATH 556 Mathematical Statistics 1 and MATH 557 Mathematical Statistics 2	
<b>5. Linear Regression</b>	ECON 468 Econometrics 1 OR MATH 423 Regression and Analysis of Variance OR MATH 533 Honours Regression and Analysis of Variance	
<b>6. Design of Experiments</b>	Not offered	(If only one of these two courses is taken, the other must be replaced by a course from the list below.)
<b>7. Survey Sampling</b>	MATH 525 Sampling Theory and Applications	

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<b>8. Electives</b>	<p><b>Select three from</b></p> <p>MATH 427 Statistical Quality Control  MATH 523 Generalized Linear Models  MATH 524 Nonparametric Statistics  MATH 680 Computation Intensive Statistics  MATH 686 Survival Analysis</p> <p>MATH 598 Topics in Probability and Statistics  MATH 782 Advanced Topics in Statistics 1  MATH 783 Advanced Topics in Statistics 2</p> <p>The following courses may be used as courses in the <i>Substantive Area</i> module if they are not taken to cover <i>Electives</i>.</p> <p>MATH 540 Life Actuarial Mathematics  MATH 541 Nonlife Actuarial Models  MATH 545 Introduction to Time Series Analysis  MATH 447 Introduction to Stochastic Processes OR  MATH 547 Stochastic Processes  MATH 671 Applied Stochastic Processes  MATH 681 Time Series Analysis</p> <p>ECON 469 Econometrics 2</p> <p>BIOS 602 Epidemiology: Regression Models  BIOS 610 Causal Inference in Biostatistics  BIOS 612 Advanced Generalized Linear Models  BIOS 637 Advanced Modeling: Survival and Other Multivariate Data</p> <p>COMP 652 Machine Learning</p>
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<b>Computer Skills</b>	
<b>9. Computer skills I</b>	<p>COMP 202 Foundations of Programming            COMP 250 Introduction to Computer Science            COMP 322 Introduction to C++</p> <p>Common statistical packages are integrated throughout the higher division statistics courses, such as MATH 423-533 or MATH 523.</p>
<b>10. Computer skills II</b>	See Computer skills I above.
<b>Communication Skills</b>	
<b>11. Communication skills</b>	<p><b><i>Any writing intensive course offered at McGill</i></b>            OR            MATH 470 Honours Research Project OR            MATH 685 Statistical Consulting OR            BIOS 624 Data Analysis and Report Writing</p>
<b>Substantive Area</b>	
<b>12. Course 1</b>	<p>Any 3 related courses (or 2 blocks of 2 related courses) above the 300 level, in an area related to statistics (applied mathematics, actuarial science, biostatistics, epidemiology, economics, computer science and machine learning, etc.). This includes courses listed as such in the <i>Electives</i> module, or courses from a minor with an application component.</p> <p>The following Mathematics and Biostatistics courses may be used.</p> <p>MATH 430 Mathematical Finance            MATH 587 Advanced Probability I            MATH 589 Advanced Probability II            BIOS 601 Epidemiology: Introduction and statistical models</p>
<b>13. Course 2</b>	
<b>14. Course 3</b>	

Expiry date: 27 June 2021.