University of Manitoba

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

Module	Accredited Courses
Mathematics Modules (4 courses in total)	
1. Calculus I **(2 courses)**	**Select one course in each of Differential and Integral Calculus:** {MATH 1230 Differential Calculus OR MATH 1500 Introduction to Calculus} AND {MATH 1232 Integral Calculus OR MATH 1700 Calculus 2}
2. Calculus II **(1 course)**	**Select one course in Multivariable Calculus:** MATH 2150 Multivariable Calculus OR MATH 2720 Multivariable Calculus
3. Linear Algebra **(1 course)**	**Select one course in Linear Algebra:** MATH 1220 Linear Algebra OR MATH 1300 Vector Geometry and Linear Algebra
Statistics and Probability Modules (9 courses in total)	
4. Mathematical Statistics **(3 courses)**	**Three courses covering Probability, Distribution Theory and basic Inference:** STAT 2400 Introduction to Probability 1 AND STAT 2800 Introduction to Probability 2 AND STAT 3100 Introduction to Statistical Inference
5. Linear Regression **(1 course)**	**One course in Linear Regression:** STAT 3450 Linear Models

Renewal date: 2030-03-26

Statistics and Probability Modules (cont'd)		
6. Design of Experiments **(0-1 course)**	**Select one or two courses among the following:** STAT 4520 Sampling Techniques STAT 4530 Design of Experiments	At least one of these two courses must be selected. If only one is taken, the other must be replaced by a course from the Module 8 list.
7. Survey Sampling **(0-1 course)**		
8. Electives **(3 courses)**	**Select any three courses among the following:** STAT 3030 Introduction to Stochastic Processes STAT 3150 Statistical Computing STAT 3490 Time Series Analysis STAT 3550 Nonlinear Regression Models STAT 3690 Multivariate Analysis STAT 4100 Statistical Inference STAT 4150 Bayesian Analysis and Computing STAT 4170 Lifetime Data Analysis STAT 4700 Statistical Consulting STAT 4250 Statistical Learning STAT 4950 Honours Thesis in Statistics Note that courses selected to satisfy this Module cannot be used to satisfy other Modules.	
Computer Skills (2 courses in total)		
9. Computer Skills I **(1 course)**	**Select one of the following:** COMP 1010 Introductory Computer Science 1 OR	

Renewal date: 2030-03-26

	COMP 1012 Computer Programming for Scientists and Engineers OR COMP 1020 Introductory Computer Science 2
10. Computer Skills II **(1 course)**	**Select one of the following:** COMP 1020 Introductory Computer Science 2; OR STAT 3150 Statistical Computing; OR STAT 4150 Bayesian Analysis and Computing; OR STAT 4250 Statistical Learning Note that a course selected to satisfy this Module cannot be used to satisfy other Modules.

Communication Skills	
11. Communication skills **(1 course)**	**Select one of the following:** STAT 4700 Statistical Consulting; OR STAT 4950 Honours Thesis; OR Any course with the “W” designation offered at the University of Manitoba.
Substantive Area	
12. Other courses **(3 or more courses)**	**Select one of the following options:** **Option 1:** complete a minor in an area other than STAT and MATH following the University of Manitoba academic calendar. **Option 2:** complete three courses at the 3000+ level in any *one* area other than STAT and MATH. **Option 3:** complete two courses at the 3000+ level in any *one* area other than STAT and MATH AND one of

Renewal date: 2030-03-26

	SCI 3980 Co-operative Education Work Term 1 OR SCI 3990 Co-operative Education Work Term 2. **Option 4:** complete two courses at the 3000+ level in each of *two* areas other than STAT and MATH. Note that work experience with a substantial statistical component can be used in lieu of the above courses in some cases. Contact the SSC for details.

Renewal date: 2030-03-26