

# STATISTICS (STAT)

Department of Mathematics and Statistics, College of Engineering and Physical Sciences,

Knowledge of statistics is crucial for understanding our world. Statistics plays a fundamental role in virtually all scientific disciplines, including biology, psychology, chemistry, marketing, medicine, epidemiology and economics. Students minoring in Statistics will develop practical skills in data visualization and analysis, statistical computing, technical writing and communication in a variety of applications areas, preparing them well for careers in the modern workplace.

## Minor Requirements (Honours)

This minor cannot be combined with a major or minor in Mathematical Science.

A total of 5.00 credits is required to complete the minor, including:

Code	Title	Credits
MATH*1080 or MATH*1200	Elements of Calculus I <sup>1</sup> Calculus I	0.50
MATH*1090 or MATH*1210	Elements of Calculus II <sup>2</sup> Calculus II	0.50
MATH*1160	Linear Algebra I	0.50
STAT*2040	Statistics I	0.50
STAT*2050	Statistics II	0.50
STAT*3100	Introductory Mathematical Statistics I	0.50
STAT*3110	Introductory Mathematical Statistics II	0.50
STAT*3240	Applied Regression Analysis	0.50
0.50 additional credits in Statistics		0.50
0.50 additional credits in Statistics or Mathematics at the 2000 level or above		0.50

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IPS\*1500 Integrated Mathematics and Physics I can count toward this 0.50 credit

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IPS\*1510 Integrated Mathematics and Physics II can count toward this 0.50 credit

## Area of Concentration Requirements (General)

This is an area of concentration within the degree: Bachelor of Arts (calendar.uoguelph.ca/undergraduate-calendar/degree-programs/bachelor-arts-ba/).

A minimum of 5.00 credits in Statistics and Mathematics is required, including:

- no more than 1.00 credits from courses at the 1000 level
- 3.00 credits in statistics (STAT), 2.00 of which must be from courses at the 3000 level or above

## Recommended Courses

Code	Title	Credits
MATH*1200	Calculus I	0.50
MATH*1210	Calculus II	0.50
STAT*2040	Statistics I	0.50
STAT*2050	Statistics II	0.50
STAT*3100	Introductory Mathematical Statistics I	0.50
STAT*3110	Introductory Mathematical Statistics II	0.50
STAT*3240	Applied Regression Analysis	0.50
0.50 additional credits in Statistics		0.50
0.50 additional credits in Statistics or Mathematics		0.50

## Diploma in Applied Statistics Requirements

The Diploma in Applied Statistics is a program offered by the Department of Mathematics and Statistics, which seeks to give students of the Applied Sciences a technical competency in the use and application of Statistics.

The program is intended mainly for those whose primary area of expertise is not in Statistics, but who feel the need to be able to use modern statistical techniques. This program seeks to fill a need of scientists to reach a useful level of competency in the use of statistical methodology.

The program consists of 5.00 credits chosen from the following list. Note that first-year courses in calculus and linear algebra are prerequisites for most of the courses on this list; take into account any necessary prerequisites when determining the sequence in which courses are taken. Consult an advisor from the department for assistance.

Code	Title	Credits
STAT*2040	Statistics I	0.50
STAT*2050	Statistics II	0.50
STAT*3100	Introductory Mathematical Statistics I	0.50
STAT*3110	Introductory Mathematical Statistics II	0.50
STAT*3210	Experimental Design	0.50
STAT*3240	Applied Regression Analysis	0.50
STAT*3320	Sampling Theory with Applications	0.50
STAT*3510	Environmental Risk Assessment	0.50
STAT*4000	Statistical Computing	0.50
STAT*4050	Topics in Applied Statistics I	0.50
STAT*4060	Topics in Applied Statistics II	0.50
STAT*4150	Topics in Applied Statistics III	0.50
STAT*4340	Statistical Inference	0.50
STAT*4350	Applied Multivariate Statistical Methods	0.50
STAT*4360	Applied Time Series Analysis	0.50