

General Information.

Ponderation: 2-2-2 *Credits:* 2

Prerequisite: Secondary IV mathematics

Objectives:

- 051C: To perform sampling and control tests
- 01E2: To process data statistically

Students are strongly advised to seek help from their instructor as soon as they encounter difficulties in the course.

Introduction. Collection, analysis and presentation of data are some of the means used to determine product quality and resolve production issues. This course will present the fundamentals of statistics, graphical techniques for analysis and presentation of process and experimental data, and determination of confidence intervals. Students will develop the ability to determine the appropriate statistical sampling plans, control tests and to process data statistically.

Course Content.**PART I: Exploring Data**

Exploring Data: Variables and Distributions

- Picturing Distributions with Graphs
- Describing Distributions with Numbers
- The Normal Distributions

PART II: From Exploration to Inference

Producing Data

- Producing Data: Sampling
- Producing Data: Experiments

Probability and Sampling Distributions

- Introducing Probability
- Sampling Distributions
- Binomial Distributions

Foundations of Inference

- Confidence Intervals: The Basics
- Tests of Significance: The Basics
- Inference in Practice

PART III: Inference about Variables (optional)

Quantitative Response Variable

- Inference about a Population Mean

Categorical Response Variable

- Inference about a Population Proportion

PART IV: Inference about Relationships (optional)

- Two Categorical Variables: The Chi-Square Test

Reference. There is no required textbook for this course. A good reference for the course material is :

The Basic Practice of Statistics, 7th edition
by Moore, Notz and Fligner

Note that this book is not available for purchase at the bookstore.

Course Costs. A scientific calculator (\$10-\$25) is necessary.

Teaching Methods. This course will be 60 hours, meeting three times a week for a total of 4 hours per week. The main techniques used will be the lecture and problem-solving sessions, class discussions and assigned reading for independent study. Regular homework involving a minimum of two hours per week should be expected. Students are responsible for all problems and exercises in the text relevant to material covered in class, as well as material covered in missed classes.

Other Resources.

Math Website.

<http://departments.johnabbott.qc.ca/departments/mathematics>

Math Lab. Located in H-022; open from 9:00 to 16:00 (weekdays) as a study area, and from 11:30 to 16:00 for borrowing course materials or using the computers and printers for math assignments.

Math Help Centre. Located in H-022; teachers are on duty from 9:00 until 16:00 to give math help on a drop-in basis.

Academic Success Centre. The Academic Success Centre, located in H-117, offers study skills workshops and individual tutoring.

Departmental Attendance Policy. Regular attendance is expected. Missing six classes is grounds for automatic failure in this course. Many of the failures in this course are due to students missing classes.

Evaluation Plan. A student's Final Grade will be calculated by the following distribution:

- Class Tests (3):	50%
- Problem Solving Sessions:	10%
- Final Exam:	40%

Your best class test will be worth 20%, and the other two class tests will be worth 15% each. Also please note that the problem solving sessions will never be made up for under any circumstances.

Students must be available until the end of the final examination period to write exams.

College Policies. Article numbers refer to the IPESA (Institutional Policy on the Evaluation of Student Achievement, available at <http://johnabbott.qc.ca/ipesa>). Students are encouraged to consult the IPESA to learn more about their rights and responsibilities.

Changes to Evaluation Plan in Course Outline (Article 4.3). Changes to the evaluation plan, during the semester, require unanimous consent.

Mid-Semester Assessment MSA (Article 3.3). Students will receive an MSA in accordance with College procedures.

Religious Holidays (Article 3.2). Students who wish to observe religious holidays must inform their teacher in writing within the first two weeks of the semester of their intent.

Grade Reviews (Article 3.2, item 19). It is the responsibility of students to keep all assessed material returned to them in the event of a grade review. (The deadline for a Grade Review is 4 weeks after the start of the next regular semester.)

Results of Evaluations (Article 3.3, item 7). Students have the right to receive the results of evaluation, for regular day division courses, within two weeks. For evaluations at the end of the semester/course, the results must be given to the student by the grade submission deadline.

Cheating and Plagiarism (Articles 8.1 & 8.2). Cheating and plagiarism are serious infractions against academic integrity, which is highly valued at the College; they are unacceptable at John Abbott College. Students are expected to conduct themselves accordingly and must be responsible for all of their actions.