

Last Revised: January 2021

**COURSE INFORMATION**

**Course Title:** Quantitative Methods (II)

**Course Number:** STAT 291

**Credits:** 4

**Total Weeks:** 14 (Fall, Spring)  
12 (Summer)

**Total Hours:** 39

**Course Level:**  First Year  Second Year  
 New  Revised Course  
 Replacement Course

**Department:** Mathematics

**Department Head:** G. Belchev

**Former Course Code(s) and Number(s) (if applicable):** N/A

**Pre-requisites (If there are no prerequisites, type NONE):** MATH 111 with MATH 112 recommended

**Co-requisite Statement (List if applicable or type NONE):** NONE

**Precluded Courses:** N/A

**COURSE DESCRIPTION**

This course covers basic statistical concepts and methods used in business and commerce. Topics include types of data, graphical displays, probability, statistical inference, confidence intervals, hypothesis testing and linear regression techniques.

**LEARNING OUTCOMES**

Upon successful completion of the course, students will be able to:

- Understand the methods to collect, analyze and interpret data.
- Understand Central Limit Theorem and Law of Large Numbers.
- Do interval estimation and interpret the outcomes.
- Do hypothesis testing and interpret the outcomes.

**INSTRUCTION AND GRADING**

Instructional (Contact) Hours:

Type	Duration
Lecture	39
Seminars/Tutorials	
Laboratory	
Field Experience	
Other ( <i>specify</i> ):	
Total	39

**Grading System:** Letter Grades  Percentage  Pass/Fail  Satisfactory/Unsatisfactory  Other

**Specify passing grade:** 50%

**Evaluation Activities and Weighting** (total must equal 100%)

Assignments: % <i>Specify number of, variety, and nature of assignments:</i>	Lab Work: %	Participation: % <i>Specify nature of participation:</i>	Project: % <i>Specify nature of project:</i>
Quizzes/Test: 25%	Midterm Exam: 30%	Final Exam: 45%	Other: %

### TEXT(S) AND RESOURCE MATERIALS

Provide a full reference for each text and/or resource material and include whether required/not required.

Introduction to the Practice of Statistics (9th edition), Moore, McCabe, and CRAIG. Freeman.

### COURSE TOPICS

List topics and sequence covered.

<b>Week</b>	<b>Topic</b>
Week 1	Looking at Data – Distribution
Week 2	Looking at Data – Distribution and Looking at Data – Relationship
Week 3	Looking at Data – Relationship and Analysis of Two-Way Table
Week 4	Producing Data (Sampling)
Week 5	Producing Data (Experimental Designs)
Week 6	Probability: The Study of Randomness
Week 7	Sampling Distributions <b>MIDTERM</b>
Week 8	Introduction to Inference (Interval Estimation)
Week 9	Introduction to Inference (Hypothesis Testing)
Week 10	Inference for Distributions
Week 11	Inference for Proportions
Week 12	Analysis of Two-way Table and Inference for Regression
Week 13	Decision Analysis, and Simulation (if time permits)
Week 14	<b>FINAL EXAM</b>

**NOTES**

1. Students are required to follow all College policies. Policies are available on the website at: [Coquitlam College Policies](#)
2. To find out how this course transfers, visit the BC Transfer Guide at: [bctransferguide.ca](http://bctransferguide.ca)