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CSTP 2108: Mathematics for Programmers

EFFECTIVE DATE

September 2019

DEPARTMENT

Computer Systems Tech Diploma

DESCRIPTION

This course deals with discrete mathematics, probability and statistics. Topics include the basics of Boolean logic, introduction to vector and matrix algebra, set theory, counting, and selected topics in combinatorics such as Graph theory and Coding theory. This results in students having basic familiarity with data distribution, probability of a situation out of all possible outcomes, and how basic statistical modeling, analysis, and computations are performed for real-life applications.

CREDITS

2.0

YEAR OF STUDY

2nd Year Post-secondary

PREREQUISITES

None

COREQUISITES

None

COURSE LEARNING OUTCOMES

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

- Demonstrate proficiency with basic operations in Boolean algebra
- Demonstrate the ability to perform basic arithmetic operations on vectors and matrices
- Solve basic problems in counting theory involving combinations and permutations
- Describe the basic concepts in applied probability and statistics
- Describe how to extract useful information from a statistical distribution
- Describe the basic properties of graph structures

PRIOR LEARNING ASSESSMENT & RECOGNITION (PLAR)

None

HOURS

Lecture: 40

INSTRUCTIONAL STRATEGIES

Instructional strategies include classroom lectures, demonstrations, group discussions, computer lab and hands-on practical work.

GRADING SYSTEM

Letter Grade (A-F)

PASSING GRADE

C

EVALUATION PLAN

Type	Percentage	Assessment activity
Assignments	50	5 assignments
Midterm Exam	25	
Final Exam	25	

COURSE TOPICS

- Vectors and Matrices
- Boolean Algebra
- Counting theory and probability
- Data sample distribution
- Statistical analysis and modelling
- Combinatorics concepts

LEARNING RESOURCES

None

Notes:

- Course contents and descriptions, offerings and schedules are subject to change without notice.
- Students are required to follow all College policies including ones that govern their educational experience at VCC. Policies are available on the VCC website at:
<https://www.vcc.ca/about/governance--policies/policies/>.
- To find out how this course transfers, visit the BC Transfer Guide at <https://www.bctransferguide.ca>.

Broadway campus

1155 East Broadway
Vancouver, B.C. Canada
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Downtown campus

250 West Pender Street
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Annacis Island campus

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Generated at: 8:51 am on Jun. 20, 2021