

# BDAT 1005: MATHEMATICS FOR DATA ANALYTICS

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Course outlines are reviewed annually as part of continual quality improvement. This course was last updated for the effective term below.

**Effective Term**

Winter 2022

**Full Course Title**

Mathematics for Data Analytics

**Academic Level**

Post Graduate

**Subject Code**

BDAT - PG Big Data Analytics

**Course Number**

1005

**Grade Mode**

Numeric

**PLAR Applicable**

No

**Total Hours**

42

**Course Description**

This course is designed to support students in learning the mathematical principles required to apply the concepts of data analysis and big data analytics. Students work through a series of hands-on assignments covering topics such as probability, distributions, regression, topological analysis, and descriptive and inferential statistics.

**Course Content**

- Measures of central tendency
- Measures of variation
- Probability distributions
- Hypothesis testing
- Predictive analytics
- Discriminant, cluster, and factor analysis
- Visualization for mathematical analyses
- Data / result summarization and writing techniques

**Course Evaluation**

The passing grade for this course is 60%, evaluation is comprised of:

- Assignments 40%
- Tests 20%
- Mid-term Exam 20%
- Final Exam 20%

Tests/examinations/assignments must be written/submitted at the time specified. Requests for adjustments to that schedule must be made before the test/exam/assignment date to the faculty member. Failure to do so will result in a mark of "0", unless an illness/emergency can be proven with appropriate documentation at no cost to the College.

**Academic Appeal**

Students at Georgian College can appeal the following:

- A mark on an assignment, test, examination or work-integrated learning term
- Missing or incorrect assessment information on a grade report and/or transcript

**· A charge of academic misconduct**

**Note:** Students cannot appeal a final grade. It is the academic work that is appealable leading to the final grade i.e. final test, exam or assignment.

Refer to Academic Regulations in the Academic Appeal section for further details.

To graduate from graduate certificate level programs, a student must attain a minimum of 60% or a letter grade of P (Pass) or S (Satisfactory) in each course in each semester. The passing weighted average for promotion through each semester and to graduate is 60%.

**Course Learning Outcomes**

**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

1. develop and/or source properly structured data sets that support mathematics to be performed;

**Evaluation**

Introduced  
Assessed

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**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

2. explain the basic principles of applying mathematics to turn “raw data into useable information”;

**Evaluation**

Introduced  
Reinforced  
Assessed

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**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

3. apply mathematical techniques to create summaries and analysis that provide insight into various large data sets;

**Evaluation**

Introduced  
Reinforced  
Assessed

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**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

4. learn basics of data visualization to support analysis;

**Evaluation**

Reinforced

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**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

5. determine the appropriate mathematical techniques based on the type/amount of data and requirements based on business needs or research questions;

**Evaluation**

Introduced  
Reinforced  
Assessed

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**Upon successful completion of this course, the student has reliably demonstrated the ability to:**

6. execute the appropriate mathematical techniques using software.

**Evaluation**

Introduced  
Reinforced  
Assessed

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Key: 1543