

Learning Plan 2025-26

Course Name: Technical Mathematics

Course Code: Math 1004

Program(s): Electrical Engineering Technician, Energy Systems Engineering Technician/Technology, Instrumentation and Control Engineering Technician/Technology, and Wind Turbine Technician

Delivery Method: Face to Face ☒ | Hybrid ☐ | Hyflex ☐ | Online (Synchronous) ☐ | Online (Asynchronous) ☐

Name of Faculty: Frank Secretain

Contact Information: fsecretain@sl.on.ca

Name of Associate Dean: Brad Barbeau

Date prepared: 6/9/2025

Semester: Fall ☒ | Winter ☐ | Spring ☐ | Summer ☐

Location of Course Offering: Kingston Campus ☒ | Brockville Campus ☐ | Cornwall Campus ☐ | Online ☐ |
or Other (e.g., off-campus location):

Assessment Plan

Students will demonstrate learning in the following ways:

Assessment Strategy*	CLO**	VLO / PLO***	Description (e.g. Frequency, details)	% of Grade	Total %	Tentative Due Dates
BB Quizzes	1-6	-	x10 Online practice module quizzes	10x1	10	Week 2 to 12
Written tests	1-6	-	x3 In class tests on modules	3x20	60	Week 4,7,12
Project	1-8	-	x1 Take home project	10	10	Week 7 to 13
Final exam	1-6	-	x1 In class test on course	20	20	Week 14

Assessment Strategy:** refer to [Academic Assessment Policy](#) for more details; *CLO:** Course Learning Outcome; *****VLO/PLO:** Vocational Learning Outcome / Program Learning Outcome. Information about CLO/VLO/PLO is provided in the associated Course Outline document.

Program Specific Continuance Policy

Does this course belong to a program with a “program specific” continuation policy?

Yes ☐ No ☐

If “Yes”, the details of the program specific [Progression Policy \(see Appendix A\)](#) are included in the table below.

If “No”, this table will include a “N/A” and the course will adhere to the standard continuation requirements outlined in the [Progression Policy](#).

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Academic Policies

Academic Policies at St. Lawrence College ensure that protocols for grading, advancement and related academic elements are established, reviewed and publicly communicated to students. The college's [Academic Policies](#)¹ are all available online via the college website.

Required Learning Resources & Materials

The required learning resources (e.g., readings, web links, etc.) and materials (e.g., software, lab equipment, etc.) are listed in the table below.

Text Book:

Basic Technical Mathematics with Calculus by Allyn J. Washington (Pearson, 10th edition)

The textbook is optional in this course. The textbook will be an essential part of your college career and will be required in other courses in your program. The textbook will provide further explanation on topics covered in class.

Calculator:

A scientific calculator is required in this course. A recommended calculator that will be referred to in class is: Casio fx-991 MS calculator.

Blackboard and YouTube:

Students are required to access their blackboard account to obtain class material, track grades and performance, get access to important announcements, access assessments (such as quizzes and tests) online, get in contact with the instructor. Students are required to access YouTube links (available in blackboard) to watch videos of required lecture material before the assigned dates assigned.

Homework:

You must be prepared and willing to do homework in this course. For each hour in the physical or virtual classroom you should expect to devote approximately one hour to practice questions and assigned homework.

As per the Ministry of Colleges & Universities (MCU) directive on Education costs, please reference the College Bookstore for the most recent textbook cost for this course. Students may also explore options to rent or purchase used textbooks using the posted ISBN. Some courses may also use Open Educational Resources.

- [Learn more about the College Bookstore*](#)

*Please note that this information is subject to change.

¹ Academic Policies are posted online within the [Reports and Policies](#) section of the website.

Additional Notes

Information about this course, such as regulatory and accreditation requirements, is listed below.

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Delivery Schedule

Please Note:

- i) If this is a lab-based course, lab safety procedures and protocol must be specifically taught or reinforced prior to any activity taking place in the lab environment.
- ii) Any changes to this delivery schedule will be communicated in writing by the professor to the students.

Module Title	Module Topic(s)	CLO*	Learning Experiences	Resources	Dates
Numbers	Types of numbers Integers, fractions, decimals, imaginary Precision and Scientific notation	1, 5-6	Direct Instruction Demonstrations Hands-on practice	Material available on Blackboard.	week 1-2
Units	Unit conversion from traditional and unconventional units	1, 5-6	Direct Instruction Demonstrations Hands-on practice	Material available on Blackboard and MS excel.	week 2-3
Trigonometry	Scalar and vectors Def. and signs of trig. functions Degrees and Radians Right angle triangle Vector addition Applied word problems	1, 3, 5-6	Direct Instruction Demonstrations Hands-on practice Lab exercises	Material available on Blackboard and MS excel.	week 3-4
Algebra (order of operations)	The BEDMAS system Introduction of variables Operations with algebraic expressions Introduction of functions and notation Applied word problems	1-2, 5-7	Direct Instruction Demonstrations Hands-on practice Lab exercises	Material available on Blackboard and MS excel.	week 5-12
Algebra (2 variables)	Solving sets of equations Substitution method (algebraically) Elimination method and matrix notation Applied word problems	1-2, 4-7	Direct Instruction Demonstrations Hands-on practice Lab exercises	Material available on Blackboard and MS excel.	week 12-13
Graphing	Plotting 2 variable equations Coordinate systems	1-2, 4-7	Direct Instruction Demonstrations Hands-on practice Lab exercises	Material available on Blackboard and MS excel.	week 13-14

*CLO: Course Learning Outcome

Associate Dean Signature: Brad Barker Date: July 7 2025
Click or tap to enter a date.