Mathematics 3012 SA
Vector Analysis, Spring 2023

Instructor: Dr. Luis Santiago

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Lectures/Labs:
Monday to Friday from 11:30 AM to 2:30 PM in room AT 2020.

Office hours: By appointment.

Textbooks: *Calculus: Early transcendental functions*, by Larson and Edwards, Brooks/Cole. *Calculus* or *Multivariable Calculus* by James Stewart, Books/Cole.

Course Content: The course will cover the following topics: vectors and operations on vectors, space coordinates, lines, planes, surfaces, vector-valued functions and their differentiation and integration, tangent and normal vectors, functions of several variables, limits, continuity, partial derivatives of functions of several variables, tangent planes and normal lines, iterated integrals, double integrals, triple integrals, volume and surface areas, Jacobians, line integrals, Green's Theorem, surface integrals, Divergence Theorem, and Stokes' Theorem.

Labs: The lab will reinforce concepts through explanations and examples, as well as provide students with the opportunity to ask questions about the content given in class or assignment problems.

Grading Scheme:

Assignments	10 %
Midterm Exam 1 (Monday May 8 from 11:30 AM to 12:30 PM)	30 %
Midterm Exam 2 (Monday May 15 from 11:30 AM to 12:30 PM)	30 %
Final Exam (Saturday May 22)	30 %

Assignments: Assignments will be collected and graded online using the free online homework system WebWork. A link to WebWork can be found on the d2l webpage of the course.

Accommodations: Lakehead University is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you think you may need accommodations, you are strongly encouraged to contact Student Accessibility Services (SAS) and register as early as possible. For more information, please visit:

http://studentaccessibility.lakeheadu.ca

Important Dates: Please note the following important dates:

Monday May 1, 2023:	First day of classes
Friday May 19, 2023:	Final day of classes
Wednesday May 3, 2023 :	Final date to register
Thursday May 11, 2023:	Final date to withdraw
Saturday May 20, 2023:	Examination Period
Sunday May 21, 2023:	Exam Contingency Date