

Course outline: MATH 3012, FALL 2025

Instructor: Dr. Razvan Anisca, RB 2049, email: ranisca@lakeheadu.ca

Office Hours: Tuesday, Friday 10-11 am

Class times: FA: Tuesday, Thursday 1-2:15 pm (RB 1042)
FB: Tuesday, Thursday 2:30-3:45 pm (RC 1002)

Lab/Tutorial Hour: (Friday 8:30-9:30 am in RB 1042) No new material will be covered in the lab/tutorial. The lab/tutorial will reinforce concepts through examples, as well as provide students with the opportunity to ask questions about the content given in class or assignment problems. Though the lab/tutorial is not mandatory, it is beneficial to attend.

Accepted Textbook (Not required): *Calculus: Early transcendental Functions* by Larson and Edwards, Brooks/Cole.

Also: *Calculus* or *Multivariable Calculus* by James Stewart, Brooks/Cole.

Note: as used textbooks (any edition should be fine!), the cost associated with these textbooks should be very low.

Exams: There will be two midterm exams on **October 24** and **November 21** during the **lab hour**. The final exam will be scheduled by the registrar's office. No calculators or other external resources are allowed.

Grade: The midterm exams will be worth 25% of your final grade. The homework will count for 10%, and the final exam 40%.

Homework: Assignments are given as topics are covered in class. Assignments *will be collected and graded online using the free online homework system WeBWork*. Further information will be provided during the next couple of weeks.

Course content: The course will cover the topics on vectors and operations on vectors, space coordinates, lines, planes, surfaces in space, vector-valued functions and their differentiation and integration, tangent vectors

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, Stokes' Theorem.

Course Policies:

- (1) Late assignments will NOT be accepted by the WeBWorK system.
- (2) There will be NO make-up exams! If you miss the midterm for a legitimate reason which you can document (e.g. doctor's note), the weight of the midterm will be *transferred* to the final exam.

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 soon as possible. For more information please visit:

[http : //studentaccessibility.lakeheadu.ca](http://studentaccessibility.lakeheadu.ca).