

**Faculty of Science Course Syllabus** (revised June 2018)**Department of Mathematics and Statistics***MATH2002**Intermediate Calculus II**Winter 2019***Instructor(s):** Roman Smirnov Roman.Smirnov@dal.ca Chase324**Lectures:** MWF: 10:35-11:25 am Henry Hicks 212**Laboratories:** N/A**Tutorials:** N/A

---

*Submit course syllabus to your Department office for posting on the Dept website [prior](#) to the start of term  
Submit requests for [final exam exemptions](#) (1000, 2000 and 3000 level courses only) to the Dean's office [at least 2 weeks prior to the start of term](#)*

**Course Description**

Topics include multiple integrals and changes of variables, and vector calculus, with an emphasis on Green's and Stokes' theorems. The course also includes an introduction to second order ordinary differential equations.

**Course Prerequisites**

Prerequisite: MATH2001

**Course Objectives/Learning Outcomes**

The student will master the following techniques and concepts:

3-dimensional integration

cylindrical and spherical coordinate systems

the change of variables formula

line and contour integrals

Green's Theorem  $\square$  flux and volume integrals

Stokes and Divergence theorems

Solving 2nd order linear ODEs with constant coefficients

applications to vibration and oscillation models

**Course Materials**

- Stewart, multi-variable calculus available at the bookstore
- Course notes made available via Dalhousie's brightspace system

**Course Assessments**

*30% Webworks weekly assignments*

*20% One-hour midterm exam held in class (TBA)*

*50% 3 hour final exam scheduled by the Registrar's Office*

### **Other course requirements**

**Conversion of numerical grades to Final Letter Grades follows the Dalhousie Common Grade Scale**

<b>A+</b> (90-100)	<b>B+</b> (77-79)	<b>C+</b> (65-69)	<b>D</b>	(50-54)
<b>A</b> (85-89)	<b>B</b> (73-76)	<b>C</b> (60-64)	<b>F</b>	(<50)
<b>A-</b> (80-84)	<b>B-</b> (70-72)	<b>C-</b> (55-59)		

### **Course Policies**

*See the attached document*

### **Course Content**

*Stewart, Sections 15.7-17.4*