

Faculty of Science Course Syllabus  
Department of Mathematics and Statistics**MATH 3120**  
**Differential Equations II**  
Winter 2024

<b>Instructor(s):</b>	Roman Smirnov	Roman.Smirnov@dal.ca	Chase324
<b>Lectures:</b>	MWF 9:35-10:25am	Dunn 304	
<b>Laboratories:</b>	N/A		
<b>Tutorials:</b>	N/A		

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**Course Description**

The topics discussed are of great importance to any student interested in applied mathematics. Areas include Fourier series, orthogonal polynomials, Sturm-Liouville problems, the classical partial differential equations, and some applications to physics, chemistry and engineering.

**Course Prerequisites**

MATH 2120.03 or MATH 2135.03 or PHYC 2140.03

**Course Objectives/Learning Outcomes**

Solving second order ODEs by power series methods and Fourier series methods, solving eigenvalue and boundary value problems.

**Course Materials**

*Differential Equations for Engineers* by Jiri Lebl, <http://www.jirka.org/diffyqs/>

**Course Assessment**

*Bi-weekly assignments, midterm, final exam*

<b>Component</b>	<b>Weight (% of final grade)</b>	<b>Date</b>
<b>Tests/quizzes</b>	1 midterm 20%	February 16, 2018 (in class)
<b>Final exam</b>	50%	(Scheduled by Registrar)
<b>Assignments:</b>	bi-weekly 30%	

**Other course requirements**

*Bi-weekly assignments, midterm, final exam*

**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**

Late homework will not be accepted except with my prior permission. A missed midterm cannot be written at another time. If you miss the midterm without my prior permission, then it will count as a 0. Exceptions are made in two cases: (1) if you obtain my prior permission to miss a midterm, or (2) if you have an officially valid excuse such as a medical doctor's note. In these cases, the weight of the missed midterm will be shifted to the final exam (i.e., the final exam will then count 70% instead of 50%). There is no make-up option for the final exam, except if you have an officially valid excuse of which I am notified prior to the exam (such as a medical doctor's note).

**Course Content**

Chapters 7, 4, 5 and (parts of) 8 in the textbook