



ORIGINAL COURSE IMPLEMENTATION DATE: September 1994  
 REVISED COURSE IMPLEMENTATION DATE: September 2015  
 COURSE TO BE REVIEWED: (six years after UEC approval) January 2021  
 Course outline form version: 09/15/14

## OFFICIAL UNDERGRADUATE CROSS-LISTED COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

<b>Course Code and Number:</b> MATH 381	<b>Number of Credits:</b> 3 <a href="#">Course credit policy (105)</a>
<b>Course Full Title:</b> Mathematical Physics <b>Course Short Title (if title exceeds 30 characters):</b>	
<b>Faculty:</b> Faculty of Science	<b>Department (or program if no department):</b> Physics
<b>Official Course Outline:</b> This is a cross-listed course. Please refer to <b>PHYS 381</b> for the official course outline.	
<b>Calendar Description:</b> Partial and ordinary differential equations. Fourier series/transforms. Legendre polynomials. Laplace transforms. Applications to heat flow and waves. Laplace's equation in 1D, 2D, 3D using Cartesian, polar, and spherical co-ordinates. Special functions including Dirac Delta, Heaviside Theta, Si, Ci, Ei, Erf, Gamma. Note: This course is offered as PHYS 381, MATH 381, and ENGR 257. Students may take only one of these for credit.	
<b>Prerequisites (or NONE):</b>	MATH 211 and (one of the following: PHYS 221 or MATH 255) and (one of the following: PHYS 112 or any other MATH course 200-level or above).
<b>Corequisites (if applicable, or NONE):</b>	NONE
<b>Pre/corequisites (if applicable, or NONE):</b>	NONE
<b>Equivalent Courses (cannot be taken for additional credit)</b> Former course code/number: n/a Cross-listed with: PHYS 381/ENGR 257 Equivalent course(s): PHYS 381/ENGR 257 <i>Note: Equivalent course(s) should be included in the calendar description by way of a note that students with credit for the equivalent course(s) cannot take this course for further credit.</i>	<b>Transfer Credit</b> Transfer credit already exists: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Transfer credit requested (OReg to submit to BCCAT): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (if yes, fill in transfer credit form) Resubmit revised outline for articulation: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No To find out how this course transfers, see <a href="http://bctransferguide.ca">bctransferguide.ca</a> .
<b>Department / Program Head or Director:</b> Derek Harnett	<b>Date approved:</b> Nov. 5, 2014
<b>Faculty Council approval</b>	<b>Date approved:</b> Nov. 28, 2014
<b>Campus-Wide Consultation (CWC)</b>	<b>Date of posting:</b> Jan. 23, 2015
<b>Dean/Associate VP:</b> Lucy Lee	<b>Date approved:</b> Nov. 14, 2014
<b>Undergraduate Education Committee (UEC) approval</b>	<b>Date of meeting:</b> Jan. 30, 2015