



**PHYSICS**  
**Science**  
**Waves, Optics & Modern Physics**  
203-NYC-05 (all sections)  
Winter 2019

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<b>Pre-requisites</b>	Mechanics (203-NYA-05), Calculus I (201-NYA-05)
<b>Co-requisites</b>	Calculus II (201-NYB-05)
<b>Ponderation</b>	3-2-3 (3 hours of lecture, 2 hours of labs, and 3 hours of work outside class for each 5 hours of class time)
<b>Course objectives</b>	<p>To analyze various situations or phenomena associated with waves, optics and modern physics using basic principles. This course is intended to introduce the student to a broad range of physical phenomena involving waves (mechanical waves, sound waves, and electromagnetic waves), geometrical and physical optics, matter waves, and quantum physics.</p> <p>Detailed information regarding the objectives and standards for this course and the speci c performance criteria is available at <a href="https://www.dawsoncol lege. qc. ca/physi cs/program-documents/sci ence/">https://www.dawsoncol lege. qc. ca/physi cs/program-documents/sci ence/</a>.</p>
<b>Course competencies</b>	<p>This course will allow the student to fully achieve the competency:</p> <p>OOOUT: Analyze various situations or phenomena associated with waves, optics and modern physics using basic principles.</p> <ol style="list-style-type: none"><li>1. Apply the basic principles of physics to the description of vibrations and waves and their transmission.</li></ol>

Reference  
materials

1.1.

**Course  
content**

The material to be covered is contained in the following chapters and sections of **Physics for Scientists**