



EFFECTIVE: SEPTEMBER 2004 CURRICULUM GUIDELINES

A. Division: **Education** **Effective Date:** **September 2004**

B. Department / Program Area: **Science and Technology / Physics** **Revision** **New Course**

If Revision, Section(s) Revised: **C, H, J, P**

Date of Previous Revision: **07 January 2002**

Date of Current Revision: **September 2004**

C: PHYS 1107 **D: Introductory General Physics I** **E: 5**

Subject & Course No.	Descriptive Title	Semester Credits
F: Calendare	tum; rotational motion; statics; vibratory motion; simple harmonic motion; waves; sound.	
G: Allocation of Contact Hours to Type of Instruction / Learning Settings Primary Methods of Instructional Delivery and/or Learning Settings: Lecture / Laboratory Number of Contact Hours: (per week / semester for each descriptor) 7 Number of Weeks per Semester: 15	H: Course Prerequisites: BC Principles of Math 12 (C or higher) & either Physics 11 (C or higher) or PHYS 1104 I: Course Corequisites: none J: Course for which this Course is a Prerequisite PHYS 1207 OR PHYS 1210 K: Maximum Class Size: 36	
L: PLEASE INDICATE:		
<input type="checkbox"/>	Non-Credit	
<input type="checkbox"/>	College Credit Non-Transfer	
<input checked="" type="checkbox"/>	College Credit Transfer:	

SEE BC TRANSFER GUIDE FOR TRANSFER DETAILS (www.bccat.bc.ca)

M: Course Objectives / Learning Outcomes

1. Identify the following mechanical quantities and their SI units:
displacement, velocity, speed, acceleration, force, mass, weight, friction, torque, work, translational kinetic energy, gravitational potential energy, power, linear momentum, impulse, angular displacement, angular velocity, angular acceleration, moment of inertia, ro

2. Properties of Matter & Waves
 - 2.1. Elastic properties of solids
 - 2.2. Hooke's law
 - 2.3. Simple harmonic motion
 - 2.4. Mechanical wave characteristics
 - 2.5. Standing waves
 - 2.6. Sound wave intensity
 - 2.7. Doppler effect
3. Laboratory experiments
 - 3.1. Composition of Forces/Static Equilibrium
 - 3.2. Uniformly Accelerated Motion
 - 3.3. Projectile Motion
 - 3.4. Simple Pendulum/Determination of Gravitational Acceleration
 - 3.5. Friction
 - 3.6. Collisions
 - 3.7. Orbital Motion and Centripetal Force
 - 3.8. Moment of Inertia
 - 3.9. Hooke's Law and Simple Harmonic Motion
 - 3.10. Standing Transverse Waves
 - 3.11. Resonant Air Columns/Speed of Sound in Air

O: Methods of Instruction

Classroom time will be divided between the presentation and discussion of concepts in mechanics on the one hand and the application of these concepts in problem solving on the other, with the majority of time devoted to the latter. The laboratory program will involve weekly, three hour sessions during which students will perform a set number of experiments. This course involves some group work.

P: Textbooks and Materials to be Purchased by Students

Cutnell, J.D. and K.W. Johnson: Physics, Fifth Edition, Wiley, 2001

Douglas College, Physics 1107 Laboratory Experiments.

Q: Means of Assessment

The final grade assigned for the course will be based upon the following components:

- a) final examination – minimum 30% / maximum of 40%
- b) at least two tests administered during the semester – minimum 40% / maximum of 50%; and
- c) submitted laboratory reports – 20%

R: Prior Learning Assessment and Recognition: specify whether course is open for PLAR

Not open for PLAR

 Course Designer(s)

 Education Council / Curriculum Committee Representative

 Dean / Director

 Registrar