LA SALLE GREEN HILLS
High School Department

1st TRIMESTER COURSE OUTLINE
SCIENCE 4 – PHYSICS (REGULAR)
SY 2010-2011

I. SCOPE AND SEQUENCE

A. Physics and the Natural Science
B. Mathematics Review
   1. Significant Figures
   2. Scientific Notation
C. Measurement
   1. Basic vs Derived Quantities
   2. SI Conversion
   3. Formula Transformation
D. Scalars and Vectors
   1. Scalar Operations
   2. Vector Addition
      a. Collinear Vectors
         i. Parallel and Anti-Parallel Directions
         ii. Addition of Collinear Vectors
      b. Non Collinear Vectors
         i. Polygon Method
         ii. Component Method

E. Horizontal Motion
   1. Non-Accelerated Horizontal Motion
   2. Accelerated Horizontal Motion
   3. Graphing Motion

F. Vertical Motion
   1. Free fall vs Non-Free fall
   2. Cases of Vertical Ideal Motion
      a. Bodies dropped
      b. Bodies thrown downward
      c. Bodies thrown upward

G. Projectile Motion
   1. Factors of 2-dimensional Ideal Motion
   2. Cases of Projectile Motion
      a. Horizontal Projectiles
      b. Angled Projectiles

H. Newton's 1st Law of Motion
   1. Translational Equilibrium
   2. Rotational Equilibrium
   3. Equilibrium of System of Masses