Registrar's office

GRANDE PRAIRIE REGIONAL COLLEGE
DEPARTMENT OF ACADEMIC DEVELOPMENT
COURSE OUTLINE

PHYSICS 0110

INSTRUCTOR: Nancy Fraser
PHONE NUMBER: 539-2980
OFFICE: J216

COURSE GOALS: This course is designed to give students an introduction to the motion of objects. The student will develop problem-solving skills.

FORMAT: This will be a lecture course with a strong emphasis on group problem solving.

ATTENDANCE POLICY: Regular attendance is expected. Attendance at labs, tests and examinations is required. If a lab, test or examination is missed, a doctor's certificate will be required if the student wishes to make up missed marks.

EVALUATION: Your final mark will be based on 4 unit tests, labs, hand-in assignments, a midterm exam, surprise tests, and the final examination. Every so often, I will give a quiz with NO advance warning.

Assignments:	15%
Labs:	15%
Unit Tests:	15%
Midterm:	15%
Final Examination:	40%
	100%

There will be 20% deducted per day for late assignments. No assignments will be accepted after corrected assignments have been returned.

COURSE CONTENT

1. Study S.I. system of units, significant digits and scientific notation. Correct method of setting up and solving problems.

2. Study significance of slope of lines, direct and inverse variations. Learn how to plot points, and the difference between dependent and independent variables.

3. Study linear motion of objects if acceleration is zero. Study linear motion of objects with an acceleration. Study the motion of objects falling under gravity.

4. Study forces and the result of these forces. Study Newton's first and second laws of motion. Distinguish between mass and weight.

5. Study trigonometry---define sine, cosine and tangent of angles as well as Pythagorean Theorem. Distinguish between scalar and vector quantities.

6. Study projectile motion horizontal and vertical motions. Study centripetal motion; simple harmonic motion.

7. Study gravitational motion, Kepler's three laws, Newton's law of universal gravitation, Newton's inverse square law.

8. Study momentum of objects, conservation of momentum; impulse. Study Newton's third law of motion.

9. Study work and power.

10. Study of energy, law of conservation of energy, elastic collisions.

11. Study Pascal's & Archimedes' principles. Study properties of fluids and solids.