

VICTOR VALLEY COLLEGE SYLLABUS

FALL 2008

Course No.: **Physics 221**

Units: **4**

Lecture Days & Hours: **TTH, 5:30 – 6:55 PM**

Section No.: **21552**

Course Title: **General Physics I**

Rooms: **31 – 44**

Lab Days & Hours: **W, 5:30 – 8:40**

Instructor Name: **Michael Butros** Office No: **31 – 45** Telephone: **(760) 245 – 2471 x 2506**

Office Hours: **Wednesday 11:05 – 12:45, Thursday 11:05 – 12:45**

Other times available by appointment

E-mail: butrosm@vvc.edu

Class URL: <http://www.butros.info/GeneralPhysicsI.htm>

FALL CALENDAR

Fall Semester Begins

August 25

Labor Day Holiday (no classes)

September 1

End of 1st 8-week term

October 18

Beginning of 2nd 8-week term

October 20

Veteran's Day Holiday (no classes)

November 10

Thanksgiving Holidays (no classes)

November 27-30

Fall Semester Ends

December 13

WITHDRAWAL POLICY

Last day to withdraw from a 16-week class and receive a "W" is November 4, 2008.

Prerequisite: MATH 104 – Trigonometry and MATH 226 – Calculus I
(MATH 226 may be taken concurrently.)

Textbook: Principles of Physics, 4th Edition, by Serway and Jewett

Course Description: This course covers vectors motion in one and two dimensions, particle dynamics, work energy, conservation laws, collisions, rotational motion and dynamics, and thermodynamics.

Course Objectives:

The student will be able to:

1. Analyze and solve problems dealing with motion in one or two dimensions.
2. Deal competently with vector mathematics including vector addition, resolution of a vector into its components, and unit vectors.
3. Analyze and solve dynamics problems by application of Newton's Laws and conservation laws.
4. Deal effectively with problems involving gravitation and orbital motions.
5. Analyze and solve problems in thermodynamics.
6. Competently perform experiments dealing with mechanics and thermodynamics.

Course Content:

The following topics will be covered in lecture

- ❖ An Introduction to Measurement and Vector Mathematics
- ❖ Motion in One or Two Dimensions
- ❖ Statics and Dynamics Analysis by Use Of Newton's Laws
- ❖ Work - Energy Concepts, Linear Momentum and Angular Momentum
- ❖ Rotational Motion and Dynamics and Analysis
- ❖ Gravitation and Orbital Motions
- ❖ Thermodynamics

The following experiment topics will be covered in lab

- ❖ The acceleration of a Freely Falling Body
- ❖ Composition of Concurrent Forces
- ❖ Momentum and Elastic and Inelastic Collisions
- ❖ Centripetal Force
- ❖ Boyle's Law
- ❖ Specific Heat of Solids

Attendance Policy: Regular attendance to lecture and lab is strongly recommended. (Class attendance is not a measure of performance or proficiency. Whether a student is just physically present in the class is not a valid basis for grading. Reference Title 5 Section 55002 of the California Code of Regulations: (A) Grading Policy. The course provides for measurement of student performance in terms of stated course objectives and culminates in a formal, permanently recorded grade based upon uniform standards in accordance with section 55758 of this Division. The grade is based on demonstrated proficiency in the subject matter and the ability to demonstrate that proficiency, at least in part, by means of written expression that may include essays, or, in courses where the curriculum committee deems them to be appropriate, by problem solving exercises or skills demonstrations by students.)

Grading Policy: The grading for this class will consist of the following components:

- Quizzes and HW 10 %
- Lab Reports 20 %
- Midterm One 20 %
- Midterm Two 20 %
- Final 30 %

The final grade will be given according to the following scale

Total Percentage	Final Grade
90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

IMPORTANT NOTE: Students with disabilities, whether physical, learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disabled Student Program & Services as soon as possible to ensure that such accommodations are implemented in a timely fashion. Authorization from DSPS is required before any accommodation can be made.

Class Conduct Policies:

- Anyone caught cheating will receive an “F” for the course and I will also pursue **THE STRONGEST DISCIPLINARY ACTION AVAILABLE AT THE COLLEGE**
- **ONLY** those registered in the class are allowed in the classroom
- **TURN OFF** the sound feature on your cell phone or pager before class begins
- You are encouraged to work with each other on the homework assignments but each student should turn in their own assignment
- All assignments and exams are to be completed on the assigned date. **THERE WILL BE NO MAKE UP HOMEWORK ASSIGNMENTS OR EXAMS.** Inform the instructor if you are going to miss a class on a day when an exam or an assignment is due
- You are **ENCOURAGED** to ask questions in class
- Make sure you contact the instructor if you have any questions regarding the class
- **ABSOLUTELY** no food or drink during lab sessions.

TENTATIVE SCHEDULE – FALL 2008

PHYSICS 221

DAY	DATE	SCHEDULED
Tuesday	8/26/08	Introduction
Thursday	8/28/08	Vectors
Tuesday	9/2/08	Motion in One Dimension
Thursday	9/4/08	Motion in One Dimension
Tuesday	9/9/08	Motion in Two Dimensions
Thursday	9/11/08	Motion in Two Dimensions
Tuesday	9/16/08	Laws of Motion
Thursday	9/18/08	Laws of Motion
Tuesday	9/23/08	Applications of Newton's Laws
Thursday	9/25/08	Energy and Energy Transfer
Tuesday	9/30/08	Review for First Midterm
Thursday	10/2/08	Midterm One
Tuesday	10/7/08	Potential Energy
Thursday	10/9/08	Potential Energy
Tuesday	10/14/08	Momentum and Collisions
Thursday	10/16/08	Momentum and Collisions
Tuesday	10/21/08	Relativity
Thursday	10/23/08	Rotational Motion
Tuesday	10/28/08	Rotational Motion
Thursday	10/30/08	Review for Midterm Two
Tuesday	11/4/08	Midterm Two
Thursday	11/6/08	Gravity
Tuesday	11/11/08	Gravity
Thursday	11/13/08	Mechanical Waves
Tuesday	11/18/08	Mechanical Waves
Thursday	11/20/08	Standing Waves
Tuesday	11/25/08	Standing Waves
Thursday	11/27/08	NO CLASS
Tuesday	12/2/08	Fluid Mechanics
Thursday	12/4/08	Fluid Mechanics
Tuesday	12/9/08	Review for Final
Thursday	12/11/08	Final

TENTATIVE LAB SCHEDULE – FALL 2008

- ❖ Wednesday, August 27, 2008 – Introduction
- ❖ Wednesday, September 3, 2008 – Linear Regression
- ❖ Wednesday, September 10, 2008 – The Acceleration of a Freely Falling Body
- ❖ Wednesday, September 17, 2008 – The Acceleration of a Freely Falling Body
- ❖ Wednesday, September 24, 2008 – Composition of Concurrent Forces
- ❖ Wednesday, October 1, 2008 – Composition of Concurrent Forces
- ❖ Wednesday, October 8, 2008 – Problems
- ❖ Wednesday, October 15, 2008 – Coefficient of Friction
- ❖ Wednesday, October 22, 2008 – Coefficient of Friction
- ❖ Wednesday, October 29, 2008 – Momentum and Inelastic Collisions
- ❖ Wednesday, November 5, 2008 – Momentum and Elastic Collisions
- ❖ Wednesday, November 12, 2008 – Standing Waves on Strings
- ❖ Wednesday, November 19, 2008 – Standing Waves on Strings
- ❖ Wednesday, November 26, 2008 – Problems
- ❖ Wednesday, December 3, 2008 – Boyle's Law
- ❖ Wednesday, December 10, 2008 – Problems