

# VICTOR VALLEY COLLEGE SYLLABUS

## FALL 2008

---

**Course No.: Physics 201**

**Units: 4**

**Lecture Days & Hours: TTH, 9:35 – 11:00 AM**

**Section No.: 21548**

**Course Title: Engineering Physics I**

**Rooms: 31 – 44**

**Lab Days & Hours: M, 9:00 – 12:10**

---

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

**Office Hours: Wednesday 10:30 – 12:10, Thursday 11:05 – 12:45**

**Other times available by appointment**

**E-mail: [butros@m@vvc.edu](mailto:butros@m@vvc.edu)**

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

---

### FALL CALENDAR

Fall Semester Begins

August 25

**Labor Day Holiday (no classes)**

**September 1**

End of 1<sup>st</sup> 8-week term

October 18

Beginning of 2<sup>nd</sup> 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 226 – Calculus I.

(MATH 226 may be taken concurrently.)

**Textbook:** University Physics, EXTENDED, 12<sup>th</sup> Edition, by Young and Freedman.

**Course Description:** Course material includes a study of vectors, rectilinear motion, motion in a plane, particle dynamics, work and energy, conservation laws, collisions, rotational kinematics and dynamics.

### **Course Objectives:**

The student will be able to:

1. Analyze and solve kinematics problems for both rectilinear motion and motion in a plane.
2. Deal competently with vector mathematics concepts.
3. Analyze and solve dynamics problems by application of Newton's Laws, and conservation laws.
4. Competently perform experiments in mechanics.

## Course Content:

The following topics will be covered in lecture

- ❖ An Introduction to Measurement and Vector Analysis
- ❖ Kinematics Analysis Involving Rectilinear Motion and Motion in a Plane
- ❖ Particle Dynamics Analysis by use of Newton's Laws
- ❖ Conservation Laws for Energy, Linear momentum, and Angular Momentum
- ❖ Rotational Kinematics and Dynamics Analysis

The following experiment topics will be covered in lab

- ❖ The Acceleration of a Freely Falling Body
- ❖ Composition of Concurrent Forces
- ❖ Momentum: Ballistics
- ❖ Momentum and Elastic Collisions
- ❖ Momentum and Inelastic Collisions
- ❖ Centripetal Force
- ❖ Moment of Inertia

**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 201

DAY	DATE	COVERED
Tuesday	8/26/08	Introduction
Thursday	8/28/08	Units and Vectors
Tuesday	9/2/08	Units and Vectors
Thursday	9/4/08	Units and Vectors
Tuesday	9/9/08	Motion in One Dimension
Thursday	9/11/08	Motion in One Dimension
Tuesday	9/16/08	Motion in Two or Three Dimensions
Thursday	9/18/08	Motion in Two or Three Dimensions
Tuesday	9/23/08	Newton's Laws of Motion
Thursday	9/25/08	Newton's Laws of Motion
Tuesday	9/30/08	Applying Newton's Laws
Thursday	10/2/08	Applying Newton's Laws
Tuesday	10/7/08	Review for Midterm One
Thursday	10/9/08	Midterm One
Tuesday	10/14/08	Work and Kinetic Energy
Thursday	10/16/08	Work and Kinetic Energy
Tuesday	10/21/08	Potential Energy and Energy Conservation
Thursday	10/23/08	Potential Energy and Energy Conservation
Tuesday	10/28/08	Momentum, Impulse and Collisions
Thursday	10/30/08	Momentum, Impulse and Collisions
Tuesday	11/4/08	Rotation of Rigid Bodies
Thursday	11/6/08	Rotation of Rigid Bodies
Tuesday	11/11/08	Review for Midterm Two
Thursday	11/13/08	Midterm Two
Tuesday	11/18/08	Dynamics of Rotational Motion
Thursday	11/20/08	Dynamics of Rotational Motion
Tuesday	11/25/08	Equilibrium and Elasticity
Thursday	11/27/08	NO CLASS
Tuesday	12/2/08	Equilibrium and Elasticity
Thursday	12/4/08	Review for Final
Tuesday	12/9/08	Review for Final
Thursday	12/11/08	Final

# TENTATIVE LAB SCHEDULE – FALL 2008

- ❖ Monday, August 25, 2008 – Introduction
- ❖ Monday, September 1, 2008 – NO CLASS
- ❖ Monday, September 8, 2008 – Linear Regression
- ❖ Monday, September 15, 2008 – The Acceleration of a Freely Falling Body
- ❖ Monday, September 22, 2008 – The Acceleration of a Freely Falling Body
- ❖ Monday, September 29, 2008 – Coefficient of Friction
- ❖ Monday, October 6, 2008 – Coefficient of Friction
- ❖ Monday, October 13, 2008 – Composition of Concurrent Forces
- ❖ Monday, October 20, 2008 – Composition of Concurrent Forces
- ❖ Monday, October 27, 2008 – Momentum and Elastic Collisions
- ❖ Monday, November 3, 2008 – Momentum and Inelastic Collisions
- ❖ Monday, November 10, 2008 – NO CLASS
- ❖ Monday, November 17, 2008 – Momentum Ballistics
- ❖ Monday, November 24, 2008 – Momentum: Ballistics
- ❖ Monday, December 1, 2008 – Moment of Inertia
- ❖ Monday, December 8, 2008 – Moment of Inertia