VALENCIA COLLEGE
College Physics with Algebra I (PHY 2053C)
SYLLABUS: Spring 2017

Instructor Information:

<table>
<thead>
<tr>
<th>Instructor</th>
<th>Dr. O. Moussa</th>
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<tbody>
<tr>
<td>E-Mail</td>
<td><a href="mailto:omoussa@mail.valenciacollege.edu">omoussa@mail.valenciacollege.edu</a></td>
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<tr>
<td></td>
<td>Expect a response within 48 hours.</td>
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<tr>
<td>Instructional method</td>
<td>Lectures / Demos / Labs / Problem Solving Sessions. BlackBoard for announcements and assignments.</td>
</tr>
<tr>
<td>Outside the classroom</td>
<td>You will typically find me in the lab, 2-209, TR 12:45 pm – 2:30pm, or by appointment.</td>
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Course information:

<table>
<thead>
<tr>
<th>Course title</th>
<th>College Physics w/ Algebra I - PHY 2053C</th>
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<tbody>
<tr>
<td>Course number</td>
<td>CRN 25674</td>
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<tr>
<td>Text book</td>
<td>“Physics” by Cutnell &amp; Johnson, 9\textsuperscript{th} or 10\textsuperscript{th} edition</td>
</tr>
<tr>
<td>Meeting days/time</td>
<td>Lecture: Tuesday- Thursday from 2:30pm - 3:45pm. Scheduled Lab hour: Thursday from 4:00pm - 4:50pm. Laboratory: Scheduled by the student online.</td>
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<tr>
<td>Prerequisite</td>
<td>Trigonometry</td>
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<tr>
<td>Classroom</td>
<td>WC- 002-240</td>
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<tr>
<td>Drop/Refund Deadline</td>
<td>January 17\textsuperscript{th} @ 11:59 p.m.</td>
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<tr>
<td>Withdrawal Deadline</td>
<td>March 31\textsuperscript{st} @ 11:59 p.m.</td>
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<tr>
<td>Final Examination</td>
<td>April 27\textsuperscript{th}, 1:00 pm. – 3:30 pm, in class (WC 2-240).</td>
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Course description:
PHY 2053 is the first of a two-semester sequence in introductory physics offered primarily for students majoring in information technology, the biological sciences and pre-health professions. Special emphasis is placed on understanding major principles governing general phenomena in Nature, and mathematics is used as a tool to clarify concepts. Students should have a good working knowledge of algebra and trigonometry.
Course outcomes:
Upon the completion of this course, participants will be able to:

• Develop a conceptual and analytical understanding of motion in one and two dimensions.
• Develop a good understanding of forces and their effect on motion through Newton's law of motion.
• Develop an understanding of Work, Energy, Power and the concept of conservation of energy.
• Develop an understanding of linear momentum, Impulse and the concept of conservation of momentum.
• Develop a conceptual and analytical understanding of rotational motion and its dynamics.
• Develop an understanding of the basic concept of simple harmonic motion and gain problems solving skills related to the topic.
• Gain a basic understanding of the fundamental principles of fluid mechanics and apply these principles to solving problems.
• Gain a basic understanding of the fundamental principles of thermal physics and apply them to solving problems.
• Develop professional ethics, laboratory and data analysis skills applicable to standard introductory physics labs.

Valencia College Core Competencies
The faculty of Valencia College has identified four core competencies that define the learning outcomes for a successful Valencia graduate. These competencies are at the heart of the Valencia experience and provide the context for learning and assessment at Valencia College. You will be given opportunities to develop and practice these competencies in this class. The four competencies are:

1. **Think** - think clearly, and creatively, analyze, synthesize, integrate and evaluate in the many domains of human inquiry
2. **Value** - make reasoned judgments and responsible commitments
3. **Communicate** - communicate with different audiences using varied means
4. **Act** - act purposefully, effectively and responsibly.
Course requirements:
In order to successfully complete the course, participants are required to adhere to the following policy regarding attendance, homework, laboratory work, in-class activities, and tests.

Attendance:
Regular attendance in the lecture is imperative. No more than 4 absences are allowed. After the 4th absence, the instructor reserves the right to withdraw the student from the class.

Homework:
There will be graded homework assignments for every chapter we cover. The graded assignments will be done online. You are encouraged to discuss the problems among yourselves; however, each of you is responsible for submitting your own individual answers. The system has a cutoff date after which the assignment will be graded according to the “late-submission” schedule indicated on each assignment.

Laboratory work: The laboratory component is an integral part of this course.
- There will be 9 experiments that you will perform throughout the term, and which you will have to schedule on your own using an online scheduler (that will be explained during the scheduled laboratory period on the first week, so please make sure you attend.)
- For each experiment, you will be asked to fill the set of data sheets provided, and to answer a set of post-lab questions. Each student is required to submit their own individual answers to the post-lab questions. Post-lab questions will be available as assignments on Blackboard.
- In addition, you will be asked to write a full lab report for one experiment of your choice between M9c and M16a. A timely announcement will be made, including detailed instructions and deadlines.
- Please note that absence from a lab will result in a 0 for that lab. Missing three or more labs will result in a failing grade.

Quizzes: Typically, there will be a quiz on each chapter at the beginning of the lecture following the completion of the chapter. These quizzes are a great opportunity for you to make sure you are keeping pace with the lectures.

Test and Exam Policies:
- All tests are closed book, closed notes.
- You may bring with you to each test one sheet of formulae.
- The use of calculators is strongly encouraged.
- Tests will be graded with partial credit based on the use of proper methods and procedures.
**Make-Up Exam Policy:** Only in the event of extraordinary circumstances will the students be allowed to take a make-up exam. The only way the students will be allowed to take the make-up exam is if they have a *legitimate* excuse, accompanied by the appropriate documentation.

**Study tips:**
- **Attend class and don’t be tardy.** Students who follow this rule won’t miss important information.
- **Take notes during the lectures. Be engaged.** Ask and answer questions.
- **Rewrite your notes, and clarify confusing concepts soon after the lecture.**
- **Spend 1-2 hour blocks of time every day reading the text & solving problems.**
- **Make lists of confusing topics from your studying and ask questions.**
- **Visit the physics lab.** You can always find there a professor or a student who can answer your questions.
- **Start/Join a study group.**

**Tutoring Center:** The West Campus Tutoring Center (located in the Math Center 7-240) offers free academic assistance face-to-face and online. Familiarize yourself with their services and hours of operation.

**Evaluation:**
Participants will be evaluated according to their participation in the following manner:

**Grades:**
- Two “mid-term” tests 20%
- Investigation 10%
- Final exam 20%
- Quizzes 15%
- Online Homework 15%
- Lab work 20%

**Grading Scale:**

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<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
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<tbody>
<tr>
<td>A</td>
<td>&gt;90</td>
</tr>
<tr>
<td>B</td>
<td>&gt;80 &amp; &lt;90</td>
</tr>
<tr>
<td>C</td>
<td>&gt;70 &amp; &lt;80</td>
</tr>
<tr>
<td>D</td>
<td>&gt;60 &amp; &lt;70</td>
</tr>
<tr>
<td>F</td>
<td>&lt;60</td>
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*There will be extra credit points given for participation in class activities and discussions.* Opportunities will be clearly announced and explained in class. Plenty of opportunities will be available to everyone from the intensely introverted to the extremely extroverted and everyone in between.
Other Policies:

Policy concerning Academic Honesty:
The rules and regulations of Valencia community college concerning Academic honesty (College Policy 6HX28:10-16) will be followed. Please read this policy in your Student Handbook or on the VCC web site.

Use of Cell Phones and Other Electronic Devices:
Students are expected to turn-off all cell phones and other electronic devices before entering the classroom, they are to be kept “out of sight” in order to avoid causing a disruption. Violators will be asked to leave the classroom for the remainder of the class that day.

Baycare Behavioral Health’s Student Assistance Program
Valencia is committed to making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help that may assist them with psychological issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. Students have 24 hour unlimited access to the Baycare Behavioral Health’s confidential student assistance program phone counseling services by calling (800) 878-5470. Three free confidential face-to-face counseling sessions are also available to students.

Students with Disabilities Information:
Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class; accommodations will not be applied retroactively. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities. West Campus SSB, Rm. 102 Phone: 407-582-1523 Fax: 407-582-1326

College Catalog/Student Handbook/Policy Manual
• A full description of all College policies can be found in the College Catalog at http://www.valenciacollege.edu/catalog/
• The Student Handbook can be found at: http://valenciacollege.edu/studentdev/CampusInformationServices.cfm
• The Policy Manual: http://www.valenciacollege.edu/generalcounsel/
• For important dates: http://valenciacollege.edu/calendar/

Syllabus Changes
The instructor reserves the right to make changes to this syllabus and the accompanying schedules. The changes will be announced on blackboard.