

## HOUSTON COMMUNITY COLLEGE SYSTEM SOUTHEAST COLLEGE

**PHYS 1401      College Physics 1      CRN: 32883      Spring 2010**

**Time:** 1:00pm- 4:00pm Tuesday (16 weeks Spring Semester course)

Lecture (room 235) at Felix Fraga Academic Campus

Instructor: Olatunde (Tunde) Amosu; Phone: 832-359-8414;

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Office Hour: before and after class

Textbook: Physics Vol 1; 8<sup>th</sup> edition by John D. Cutnell & Kenneth W. Johnson

Lab. Manual: Physics Laboratory Manual- 3<sup>rd</sup>  
edition by David H. Loyd

Test date: **On Thursdays- as detailed in the course time table below**

### Course Description

This course is a non-calculus based course provided for students with a good background in mathematics and algebra. It introduces the fundamentals of classical mechanics; motion, forces, energy, momentum, rotational motion and statics/dynamics of fluids. Laboratory experiments reinforce topics covered in class.

### Course Objectives

Upon completion of this course, students are expected to

- be able to use vectors to solve problems.
- be able to describe the motion of a particle and a rigid body in terms of their position, velocity and acceleration.
- Be able to understand the Newton's laws of motion
- Understand and apply the principles of conservation of energy, momentum, and angular momentum
- Be able to understand and apply the equations governing statics and dynamics of fluids.

### Attendance policy

Students are encouraged to attend all classes. The HCCS attendance policy is stated in the Schedule of Classes for 2008 on page 29: "Students are expected to attend classes regularly. Students are responsible for materials covered during their absences and it is the student's responsibility to consult with instructors for make-up assignments also. Class attendance is checked daily by instructors. *Although it is the responsibility of the student to drop a course for non-attendance, the instructor has full authority to drop a student for excessive absences. A student may be dropped from a course for excessive absences after the student has*

*accumulated absences in excess of 12.5% of the hours of instruction (including lecture and laboratory time)."*

Note that 12.5% is approximately 2 classes or labs for a 3 semester hour course, which meets once per week in a 16 week semester. If circumstances significantly prevent you from attending classes, please inform me. I realize that sometimes outside circumstances can interfere with school and I will try to be as accommodating as possible, but please be aware of the attendance policy.

### **Last Day for Administrative and Student Withdrawals**

For 12 week Spring '10 classes, this date is April 15th (4:30pm). I urge any student who is contemplating withdrawing from the class to see me first. You may be doing better than you think. Either way, I want to be accessible and supportive. I don't believe in "weed out" classes, and I consider you to be much more than just a name or number.

If you need assistance, do not hesitate to contact me (my phone number and e-mail address are listed above). I am here to help.

Refer to the Schedule Catalogue for HCCS policy.

### **IMPORTANT NOTICE:**

**Students who repeat a course three or more times may soon face significant tuition/fee increases at HCC and other Texas public colleges and universities. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test-taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available.**

### **Disability Support Services (DSS)**

HCCS is committed to compliance with the American with Disabilities Act and the Rehabilitation Act of 1973 (section 504).

**"Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing etc.) who needs to arrange reasonable accommodation must contact the Disability Services Office at the respective college at the beginning of each semester. Faculties are authorized to provide only the accommodations requested by the Disability Support Services Office".**

If you have any special needs or disabilities which may affect your ability to succeed in college classes or participate in college programs/activities, please contact the office of disability support services at the college. Upon consultation and documentation, you will be provided with reasonable accommodations and/ or modifications.

Also visit the ADA web site at:

<http://www.hccs.edu/students/disability/index.htm>. Faculty Handbook / faculty Orientation is also available at <http://www.hccs.edu/sudnts/disability/faculty.htm>

### Academic Honesty

Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Disciplinary proceedings may be initiated by the college system against a student accused of scholastic dishonesty. Penalties can include a grade of 'O' or 'F' on the particular assignment, failure in the course, academic probation or even dismissal from the college. Scholastic dishonesty includes but is not limited to cheating on a test, plagiarism and collusion.

### Exams and Make-up Policy

Examinations consist of three-non-cumulative regular exams plus a final. Make-up exams **will not** be given, so make every effort to take the exams on their scheduled dates.

Please note: 1) All students are required to take the final (no student can be exempted).

2) A student who completes the course by taking the final exam cannot receive a 'W' in the course. A 'W' can only be received on or before the last date of withdrawal.

### Homework

There will be homework problems assigned after each class. Although they will be graded for credit, students are strongly encouraged to attempt all assignments. The effort spent will enable them to perform better in tests and exams. Homework assignments must be turned in at the beginning of the class.

Maximum of 5 points deduction for each assignment turn in late after the due date. You will be asked to explain your work in the classes. Explaining the Physics problems in your own words helps you to understand Physics and to copy the answers without understanding of the Physics is a waste of time

### COURSE TIMETABLE

A tentative timetable is outline below.

Week	Chapter	Topic
1	1	Introduction and Mathematical Concepts
	2	Kinematics in One Dimension
2	3	Kinematics in Two Dimensions
Jan	Exam 1 (Chapters: 1, 2, 3)	
3	4	Forces and Newton's Law of Motion
3	5	Circular motion and gravitation
4	6	Works and Energy
5	7	Momentum, impulse and collision
	Exam 2; (Chapters: 4, 5 and 6)	
6	8	Rotational motion

7	9	Energy and momentum of rotational motion
8	10	Fluids
		Exam 3; (Chapters: 7, 8, 9 and 10)
9	11	Harmonic motion and elasticity
10	12	Waves
		Exam 4; (Chapters: 11, 12)
11	13	Sound
12	14	Temperature and Heat
13	15	Gases and Kinetic theory
14-15	16	Thermodynamics
16		FINAL EXAMINATION (Comprehensive)

#### Grading Policy:

60% (20% for each Exam => 3x 20%; the lowest grade will be dropped)

20% Home work and lab reports

20% Final exam

The *overall score* is based on the following:

**Overall score = 0.60 (Average of three regular exams) + 0.20 (Homework) + 0.20 (Final Exams)**

The course grade is then obtained from the overall score:

<i>Final Average</i>	90 - 100	80 - 89	70 - 79	60 - 69	< 60
<i>Letter Grade</i>	A	B	C	D	F

#### Important dates

January 19:	Regular classes' begin- Drop/Add/Swap
January 20:	Registration Ends
January 25:	Last day for Drop/Add/Swap
February 15:	Offices closed- Presidents Day (Holiday)
March 15-21:	Offices closed - Spring break
April 2- 4:	Offices closed- Easter Holiday
April 15:	Last day for student withdrawals- 4:30pm
May 9:	Instruction ends
May 10 - 16:	Final exam begins on HCCS regular class schedule
May 16:	Semester Ends
May 17:	Grades Due by 12:00 noon
May 21:	Grades available to students