


Houston Community College Astronomy Syllabus

 <p>HCC HOUSTON COMMUNITY COLLEGE</p>	<i>HOUSTON COMMUNITY COLLEGE</i>
	ASTR 1304 Introduction to Solar System Astronomy COURSE SYLLABUS

SECTION I

Astronomy Department

INFORMATION

Course: ASTR 1304

 Introduction to Solar System Astronomy

CRN:

Credit Hours: 3 lecture

Length: 16 Weeks

Class Type: Lecture

Houston Community College Astronomy Syllabus

SECTION II

INSTRUCTOR

Dr. Juan Carlos Reina

Houston Community College,
3100 Main Street, Suite 12E19, MC 1763
Houston, Texas, 77002

Office Hours: Open

Phone: 713-718-5225(O)

832-971-5045(C)

Email: Juan.Reina@sophia.hccs.edu

Astro.Info@sophia.hccs.edu

SECTION III

COURSE DESCRIPTION

ACGM

Study of the sun and its solar system, including its origin. May or may not include a laboratory.

COURSE CATALOG

An introduction to present theories about the structure and evolution of the solar system, compared to other models and theories since antiquity. A survey of the Sun, planets, moons, rings, asteroids, comets and debris in our solar system. The possibility of life in the Universe. Laboratory topics include planetary, lunar and solar observations with telescopes and/or the naked eye; measurements of the gravitational constant, gravitational acceleration and the speed of light; analysis of spectra and spacecraft images; and impact cratering simulations. Prerequisite: Must be placed into GUST 0341 (or higher) in reading and placed into MATH 0308 (or higher). Core curriculum course.

Houston Community College Astronomy Syllabus

PREREQUISITES

The prerequisite for this course is the successful completion of pre-algebra; MATH 0312. Contact the instructor should you have any questions. The astronomy courses are not requisites of one another and may be taken in any order.

COURSE GOALS

In this course students will attend six (6) hours per week in classroom which will include lectures and some lab activities. However, students will be responsible to attend out of the classroom activities such as night time observations, as scheduled, museums, field trips, astronomy societies/club meetings, and other pertinent activities which may total up to two hours per week, the hours will then be reduced from the normal lec/lab time.

STUDENT LEARNING OUTCOMES

Upon completion of this course a student should be able to complete the following:

- ✓ Understand the modern theories about the origins, structure and evolution of our Sun, other stars, galaxies and the universe as a whole.
- ✓ Examine the scientific method as it applies to the study of the universe, and in varying degrees, to the student's own particular field of work or study.
- ✓ Have the ability to obtain, understand, and draw conclusions from simple scientific evidence.

LEARNING OBJECTIVES

- ✓ The Scale of the Cosmos
- ✓ The Sky
- ✓ Cycles of The Moon
- ✓ The Origin of Modern Astronomy
- ✓ Newton, Einstein and Gravity
- ✓ Light and Telescopes
- ✓ Starlight and Atoms
- ✓ The Sun
- ✓ The Origin of the Solar System
- ✓ Earth: The Standard of Comparative Planetology
- ✓ The Moon and Mercury: Comparing Airless Worlds
- ✓ Comparative Planetology of Venus and Mars
- ✓ Comparative Planetology of Jupiter and Saturn
- ✓ Comparative Planetology of Uranus, Neptune and Pluto
- ✓ Meteorites, Asteroids, and Comets

Houston Community College Astronomy Syllabus

INSTRUCTIONAL METHODS

Homework, Quizzes, Video Reviews, and Laboratories and Explorations are available on the Astronomy Website (<http://astronomy.hccs.edu>). Please visit this site and create an account.

IN CLASS EXAMS

All students will prepare by studying the chapters in the text book, by doing the homework assignments and by researching in the library, on the Internet, or any other credible source of information. There will be four in class exams and one final exam. All exams will be closed book.

FINAL

The Final Exam is mandatory and not optional.

HOMEWORK

Homework will be due on the class period following the corresponding lecture. Mark scantrons for homework as follows; HW 1, HW 2, HW 3, ect..

LECTURE QUIZZES

All students will be required to attend and listen to the lectures during the class periods and to answer the accompanying quizzes. These quizzes will be administered directly following the lectures. The Lecture Quizzes are due immediately following the completion of the corresponding lecture, with a credit deadline at the beginning of the next class period. Mark scantrons for lecture as follows: Q1, Q2, ect..

VIDEO REVIEWS

The student will be expected to watch the videos shown during the semester and complete an accompanying video review sheet that will be due immediately following the completion of the said video.

LABORATORIES

The Students will learn to navigate the night sky by doing exercises with the help of selected computer software and desktop planetarium program. The Internet will also be used to retrieve related astronomical news and information. Assignments that accompany the explorations are to be submitted by the end of the class period or by the date specified by the instructor.

Houston Community College Astronomy Syllabus

EXPLORATIONS

There will be opportunities for the night and day time observations with telescopes. Visiting the Houston Museum of Natural Sciences, the store "Land, Sea and Sky", Space center Houston, astronomical societies/Club meetings, lectures, and other activities.

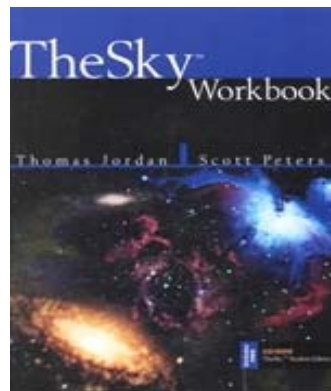
COURSE MATERIALS

TEXTBOOKS



Stars and Galaxies

Sixth Edition
Michael Seeds
Thomas/Brooks/Cole
ISBN: 1-439-05036-8



Laboratory: The Sky Workbook

Edition 1st
Thomas Jordan, Scott Peters
Thomas/Brooks/Cole
ISBN: 0-534-39072-2

Students taking both courses, ASTR 1303/1403 and ASTR 1304/1404, may benefit from purchasing the complete book; Foundations of Astronomy



Foundations of Astronomy

Eleventh Edition
Michael A. Seeds
Thomas/Brooks/Cole
ISBN: 978-14390-50354

Houston Community College Astronomy Syllabus

SECTION V

HCC POLICY STATEMENTS

ADA

If you have special needs and/or disabilities, please contact your instructor and/or the ADA counselor. If you have a disability, you must contact the instructor or any ADA counselor during the first week of class to obtain necessary documentation and testing arrangements.

ACADEMIC HONESTY

All students are expected to fulfill the rights and responsibilities outlined in the [Houston Community College Student Handbook](#). An important part of being a college student is academic honesty; it is the expectation in these courses that you will complete all academic work without resorting to:

- Cheating, in any form, whether in formal examinations or elsewhere.
- Plagiarism, using the work of others as one's own without assigning proper credit to the source
- Misrepresentation of any work done in the classroom or in preparation for a class
- Alteration of any documents pertaining to academic records

The HCC Handbook includes a more extensive list of prohibited behaviors; you should familiarize yourself with this handbook. Students who commit infractions outlined in the handbook will be dealt with according to procedures outlined in the book. Penalties could include receiving a failing grade for this course and/or being suspended from school. It is very important that you clearly understand this course expectation.

Houston Community College Astronomy Syllabus

<http://www.hccs.edu/hccs/current-students/student-handbook>

Attendance, Repeating, and Withdrawal Policies

It is the student's responsibility to be aware of HCCS attendance, conduct, and the academic conduct requirements. It is the student's responsibility to withdraw from the course by the appropriate date as listed in the schedule. Please read the student handbook. Any students using unauthorized material on a test or lab report, is subject to administrative withdrawal from the course and/or will receive a grade of zero for the respective test or report. Other disciplinary action may be taken as appropriate. Should the student have any grievance or problem dealing with any aspect of the course, please talk with your instructor, **outside of class**.

SECTION VI

CLASS REQUIREMENTS

ETIQUETTE

When in class cellular phones should be switched off or turned to silent mode. If a student must answer a call during class they should do so outside of the class room and once a student has stepped out then they can not re-enter. If the professor has not arrived by fifteen minutes past the beginning of class the class is dismissed. Students will not be let into the classroom who arrive later than fifteen minutes or more from the start of class time. During the class period students should be speaking of astronomy and only astronomy.

Students may find themselves in need of a recommendation for transferring to another college, or applying for a job or scholarship and instructors look for characteristics like the following in making a recommendation of a successful student.

- **Academic Integrity** – honestly pursuing your own academic goals
- **Study Skills** – Note taking and completing the assignments given
- **Being Attentive** – Paying attention during class time, listening to lectures and being prepared

Houston Community College Astronomy Syllabus

- **Initiative** – Attending class, finishing the assignments on time, making an effort to be involved in the class and with class activities....

However; there are behaviors that are unacceptable and disruptive to the class, the following are examples of what not to do:

- **Electronic Devices – No cell phones**, calls on cells phones, text and/or picture messaging on cell phones and no using a computer for anything other than what is assigned class work.
- **Missing classes, extending breaks, tardiness, and leaving early** on a frequent basis shows a lack of respect for your instructor, your fellow class mates and yourself.
- **No talking in class** (unless on topic and/or permitted by your instructor), passing notes, sleeping or otherwise causing the disruption of the class
- **No Cheating** – cheating of any kind including but not limited to, plagiarism, copying or aiding another student dishonestly. **These behaviors will not be tolerated.**

FIELD TRIPS

- George Observatory (at Brazos Bend State Park)

This observatory has magnitude 5 skies except to the north and northwest due to light pollution from Houston and other cities. The observatory is open to the public every Saturday night. You can go out there on any Saturday night.

There will be astronomy presentations, big scopes and little scopes, and many experienced amateur astronomers with their sophisticated equipment to talk to. There is a \$4 per person charge to get into the park. There are many amateur telescopes on the desk of the observatory, but the main 36 inch telescope costs \$3 per person (Tickets sell out early).

WARNING: BRING INSECT REPELLANT

Directions:

- The Trip is about an hour from downtown to the park.
- From Downtown head south on US 59. Drive south through Houston. After passing
- Sugarland you will drive over the Brazos River. The first exit past the river is
- The Grand Parkway exit (your exit). You will also see a brown sign

Houston Community College Astronomy Syllabus

- announcing the same exit for Brazos Bend State Park. Take the exit and turn left crossing over the freeway and head south on 2759. There's a Burger King/convenience store at this location. About a mile down the road you will intersect with 762. Continue through the intersection, still heading south, do not turn. The road name changes to 762. Follow this road for about 15 miles through many ninety degree turns (take a left turn at the light) until you get to the gate of the park which will be on your left.
- 4. An alternative route is to take US 288 south of Houston and follow the brown signs to the state park (use a map).

CLUBS AND MEETINGS

Meetings of the North Houston Astronomy Club

Meetings are held on the 4th Friday of every month. They are held in the Teaching Theatre located in the Science Building of Kingwood College @ 7:30pm. (Novice session @ 6:45pm is a 3rd point)

Meetings of the Houston Astronomical Society

Meetings are held on the 1st Friday of every month. They are held in room #117 of the Science and Research Building I of the University of Houston, central campus @ 8:00pm. (Novice sessions across the hall @ 7:00pm and is a 3rd point); <http://spacibm.rice.edu/~has/>

Meetings of the Fort Bend Astronomy Club

The Fort Bend Astronomy Club meetings are held at the HCC southwest campus in Stafford, TX. Meetings begin at 7:00pm in the #7 lecture hall and in rooms 102/104 and usually feature both novice and advanced programs. <http://www.fbac.org/>

Johnson Space Center Astronomical Society

JSCAS meets on the 2nd Friday of every month at 7:30pm. The meetings are held in the auditorium at the Center for Advanced Space Studies (formerly LPI) located at 3600 Bay Area Blvd. (at Middlebrook Drive). <http://www.ghg.net/crb/jscas/>

Houston Community College Astronomy Syllabus

GRADING

HCC GRADING SYSTEM

A	=	100 – 90
B	=	89 – 80
C	=	79 – 70
D	=	69 – 60
F	=	59 and below

COURSE GRADING

Exams	30%
(Drop the lowest of four, average three)	
Final Exam	15%
Homework	15%
Lecture Quizzes	15%
Video Reviews	10%
Laboratories	10%
Explorations	5%
Total	100%

Houston Community College Astronomy Syllabus

No Make-up exams or late assignments

The last 4 digits of your SS# will be your secret code to published grades unless you let the instructor know of another code. If you do not want to have your grade published, please talk to the instructor after class.

NOTICE If you feel you are going to be unable to continue with the course or you must stop attending class periods and you wish to drop the course you must do so by the posted **Drop Date**, use the following link to access the student calendar; http://www.hccs.edu/system/insdev/spin/student/calendars/calendar_links.htm

REQUIREMENTS FOR "A" AND "B" GRADES

A student receiving a grade of "A" must have an average of 90 or better for all means of assessment. A grade of "B" requires an average of 80-89 for all means of assessment.

Houston Community College Astronomy Syllabus

POLICY ON INTELLECTUAL DISHONESTY:

STUDENT COPY

Except for the group or team assignments, papers, case analyses, projects, etc., are individual assignments that are part of the learning experience and must be completed personally by the student. Copying another student's assignment, including computer programs and files, or citing material without credit to the author is plagiarism and cheating on exams— including getting help on take-home exams— is grounds for failing the course and/or expulsion from the university.

Student Name and Signature

Date

Professor Name and Signature

Date

STUDENT INFORMATION

Name:

Grade Code:

E-mail:

Phones

 Home **Cell**

Mailing Address:

Houston Community College Astronomy Syllabus

POLICY ON INTELLECTUAL DISHONESTY:

INSTRUCTOR COPY

Except for the group or team assignments, papers, case analyses, projects, etc., are individual assignments that are part of the learning experience and must be completed personally by the student. Copying another student's assignment, including computer programs and files, or citing material without credit to the author is plagiarism and cheating on exams— including getting help on take-home exams— is grounds for failing the course and/or expulsion from the university.

Student Name and Signature

Date

Professor Name and Signature

Date