

General Astronomy I: PHYS 1052 001 (4 credits)
Department of Physics
University of Colorado Denver
COURSE SYLLABUS

Instructor:	Ramesh Dhungana, PhD	Term:	Fall, 2018
Office:	NC 3123D	Class Meeting Days:	Tue, Thurs
Phone:	303-315-7362	Class Meeting Hours:	2:00 – 3:15 pm
E-Mail:	Ramesh.Dhungana@ucdenver.edu	Class Location:	North 1535
Website:	http://clasfaculty.ucdenver.edu/rdhungana		
Office Hours:	Tue 1 - 1:45 pm; Thurs 10 - 10:45 am (or by appointment)		
Online Tests:	Mastering Astronomy. Link: https://goo.gl/rCKAee		

COURSE OVERVIEW

I. Welcome!

This class is one of two general courses in introductory astronomy. In this class, we concentrate on the development of human understanding of the universe and survey current understanding of our planetary system. The other semester classes explore our understanding of the structure and evolution of stars and galaxies, and current scientific theories concerning the history of the Universe.

No scientific or mathematical background is assumed, beyond the high school. Astronomy is a *science*, however, so you will be expected to develop your critical thinking skills to understand and apply the scientific method. In terms of mathematics, we will use only arithmetic and a bit of simple algebra.

II. University Course Catalog Description

The history of astronomy is studied from early civilizations to the present. The basic motions of the earth, moon, sun, and planets are discussed both qualitatively and quantitatively, using elementary principles of physics. Properties of our solar system are discussed in detail, including results from unmanned space probes. Note: An additional 30 hours of laboratory work (at times to be arranged), plus appropriate report preparation time, are required to complete laboratory component of the course.

Prerequisite: High school algebra or equivalent.

Semester Hours: 4 to 4, GT Pathways Category Key: GT-SC1

This course is also a part of the natural and physical sciences CORE course with a laboratory.

III. Course Overview

This is the first part of two semester general astronomy course offered in this department. The major topics covered in this class includes, motion of the objects in the sky, brief survey of the development of ancient astronomy and current model of our solar system, laws of motion and Gravity, light and telescope, and solar systems objects. Read the scheduled chapter and complete pre-lecture assignment before class. I bring questions in the class for your response and discussion to tackle misconceptions and to develop problem solving skills and critical thinking. There will be online survey due before class on the materials that are going to be covered in the class and after every week on materials covered on that week. You will also do six take home labs and write scientific reports of those labs by using provided writing instructions. The knowledge acquired in this class will help you to obtain, read, analyze, and interpret facts to draw valid scientific conclusions and communicate those conclusions in a clear and articulate manner.

IV. Course Goals and Learning Objectives

Upon successful completion of this course, students should be able to

- recall laws of physics and describe basic astronomical phenomena.
- observe the sky and identify naked eye planets and prominent constellations and predict the pattern of their movement over the course of 24 hours.
- discuss how gravity and other laws of physics are related to the formation, interaction, and evolution of the solar system.
- write a scientific report that clearly presents purpose, procedure of collecting data, methods of analysis, and conclude the findings by observing an astronomical object or by reading the supplied materials for the purpose.
- apply scientific reasoning to interpret everyday events as well as to read future astronomical discoveries to understand their validity.

V. Course Prerequisites

Working knowledge of high school level algebra and arithmetic is required for this course.

VI. Required Texts and Materials

Text: *The Cosmic Perspective, 8th Edition*, by Bennett, Donahue, Schneider, and Voit.

(ISBN-13: 9780134708096 or 9780134160306 or 9780134058290 all includes Mastering Astro)

Internet: A pc with reliable internet connection to take online tests if you can't take the tests in library.

Online learning system: Mastering Astronomy for online assignments.

Classroom Response System: i>Clicker (any version would work but must have a serial number)

VII. Course Schedule (It is tentative. For actual schedule and due date login to Mastering Astronomy)

The list below includes the date and the chapter numbers that will be covered during that week.

(Aug 20-25) Syllabus, Introduction, Chapter 1	(Oct 11) Chapter 7: Our Planetary System
(Aug 27-31) Chapter 2: Discovering the Universe	(Oct 16) Chapter 8: Formation of solar system
(Sep 4-8) Chapter 3: The Science	(Oct 18,23) Chapter 9: Planetary Geology
(Sep 11) Chapter S1: Celestial Timekeeping	(Oct 25,30) Chapter10: Planetary Atmosphere
(Sep 13-20) Chapter 4: Motion, Energy, and Gravity	(Nov 1– 8) Chapter11: Jovian Planets
(Sep 24-29) Chapter 5: Light and Matter	(Nov 13-17)Chapter12: Asteroids, Comets..
(Oct 2) Chapter 6: Telescopes	(Nov27-30) Chapter13: Other Planetary Sys
(Oct 4) Review	(Dec 4) Chapter 24: Life in the Universe
(Oct 9) Midterm	(Dec 6): Review.

EVALUATION

VIII. Assignments

Prefecture: These assessments are given online at mastering astronomy site, <https://goo.gl/rCKAee>.

Course ID is DHUFA181052. The purpose of giving prelecture assignments is to introduce you to the contents before class and to identify difficulties so that we can spend class time addressing the difficulties and solving problems. So, it is very important that you read the topics from the book and complete the assignment.

Weekly tests: They will be given online at mastering astronomy site on the materials covered during the week. The test will contain up to 10 multiple choice questions. These are open book and notebook tests but getting help from anybody else is considered cheating.

Take home labs: In each assignment, you will be asked to observe some astronomical object or phenomenon, analyze the collected data and write a scientific report. You can observe and take data as group if you would prefer, but you need to write individual report. The instructions on what to observe and how to write the report for each lab will be posted on class website. There will also be a page of general instructions with point distributions provided for writing all labs. Labs due date will be announced in class. Lab submitted after the due date within a week will be accepted as late and it will be graded out of 80% rather than 100%.

Report and Presentations: I will publish a pool of questions related to planets after the midterm. You will choose a question and write report about it in a week. After the report has been submitted, groups will be formed based on the chosen questions. Each group will prepare a presentation combining the reports and will present in the class. Each group presentation should be around 12 mins long.

IX. Basis for Final Grade

Assessment	Points Possible	Percent of Final Grade
Participation by iclicker (counted as extra credit)	5	5%
Prelecture tests (Due every Tue, Thu noon)	100	15%
Weekly Tests (Due every Tue noon)	100	15%
Individual report and group presentation	100	10%
Labs (Due date will be announced in class)	20	20%
Midterm and Final Exams	100	(20 + 20) %
Total		105%

Grading scale (in %):

91 or more	A	71 or more but less than 74	C
88 or more but less than 91	A-	68 or more but less than 71	C-
84 or more but less than 88	B+	64 or more but less than 68	D+
81 or more but less than 84	B	60 or more but less than 64	D
78 or more but less than 81	B-	55 or more but less than 60	D-
74 or more but less than 78	C+	less than 55	F

X. Grade Dissemination

The scores of individual online tests can be seen by logging back into the test site after the due date. Your overall scores after midterm and final will be posted online and you will be notified by email. Graded Midterm test will be distributed in the class. Your final score, other average score and semester grade will be posted online, and you will be notified by email after final. If both you and I don't find error on posted scores and grade that will be your final grade. CU Denver utilizes web grading which is accessed through [UCDAccess](#). Metro students can access it through MetroConnect.

COURSE PROCEDURES

XI. Course Policies:

Attendance Policy: I encourage you to not to miss any class. You must be actively participating in group works as well as responding to the questions asked during the class by using i>Clicker. Check if your iclicker flashes green while polling. If your responses are not registered in my system, there is no way of giving you participation credit. If you miss more than one question in the session, then you will receive zero credit for the session. The participation is up to 5% extra credit of the total score. Remember, it is extra credit based on my observation and your participation. If you don't participate

actively in group works, you may not receive any credits. Mobile devices must be silenced during all class periods. Those not heeding this rule will receive zero points for attendance credit.

Late Work Policy: Make up is NOT available for missed online Weekly tests. But two worst tests will be dropped before calculating the total average score. It is possible to make up missed midterm or final ONLY if it is because of the medical emergency. A doctor's note in the official letter pad containing doctor's name and signature, phone number, address etc. is required.

There will be at least one week for submitting lab reports. You can submit them early. Lab report will not be accepted if it is more than a week late. If it is submitted within a week after deadline, it will be accepted but 20% points will be deducted. In other words, if the lab has maximum possible points 20, then it will be graded out of 16. If the lab was missed because of medical emergency, then there will be no 20% deduction, but a doctor's note should be submitted with the lab report.

Extra Credit Policy: To encourage you to do well in each online test, I will add 10% on top of your total average earned score to average prelectures and weekly tests. But your total average score at the end of semester can't exceed the 100% of the total scores of each kind of the online test. Other extra credit opportunity is not available.

Grades of "Incomplete":

The current university policy concerning incomplete grades will be followed in this course. Incomplete grades are given only in situations where unexpected emergencies prevent a student from completing the course and the remaining work can be completed the next semester. Your instructor is the final authority on whether you qualify for an incomplete. You need to have at least 75% of the course work completed for consideration. Incomplete work must be finished by the end of the subsequent semester or the "I" will automatically be recorded as an "F" on your transcript.

Group Work Policy: The online test should not be taken in group. Doing so is considered as cheating. You can take observation for lab in group but the report has to be written individually. Copying other persons report is considered as plagiarism.

Religious Observances: Please let me know within the first week of class if any due date conflicts with your major religious observances.

UNIVERSITY POLICIES

XII. Access

Disability Access:

The University of Colorado Denver is committed to providing reasonable accommodation and access to programs and services to persons with disabilities. Students with disabilities who want academic accommodations must register with Disability Resources and Services (DRS) in North Classroom 2514, Phone: 303-556-3450, TTY: 303-556-4766, Fax: 303-556-4771. I will be happy to provide approved accommodations, once you provide me with a copy of DRS's letter.

[DRS requires students to provide current and adequate documentation of their disabilities. Once a student has registered with DRS, DRS will review the documentation and assess the student's request for academic accommodations in light of the documentation. DRS will then provide the student with a letter indicating which academic accommodations have been approved.]

XIII. Academic Dishonesty

Student Code of Conduct: Students are expected to know, understand, and comply with the ethical standards of the university, including rules against plagiarism, cheating, fabrication and falsification, multiple submissions, misuse of academic materials, and complicity in academic dishonesty. For suggestions on ways to avoid academic dishonesty, please see the Academic Honesty Handbook at—

Plagiarism is the use of another person's ideas or words without acknowledgement. The incorporation of another person's work into yours requires appropriate identification and acknowledgement. Examples of plagiarism when the source is not noted include: word-for-word copying of another person's ideas or words; the "mosaic" (interspersing your own words here and there while, in essence, copying another's work); the paraphrase (the rewriting of another's work, while still using their basic ideas or theories); fabrication (inventing or counterfeiting sources); submission of another's work as your own; and neglecting quotation marks when including direct quotes, even on material that is otherwise acknowledge.

Cheating involves the possession, communication, or use of information, materials, notes, study aids, or other devices and rubrics not specifically authorized by the course instructor in any academic exercise, or unauthorized communication with any other person during an academic exercise. Examples of cheating include: copying from another's work or receiving unauthorized assistance from another; using a calculator, computer, or the internet when its use has been precluded; collaborating with another or others without the consent of the instructor; submitting another's work as one's own.

Fabrication involves inventing or counterfeiting information—creating results not properly obtained through study or laboratory experiment. Falsification involves deliberate alteration or changing of results to suit one's needs in an experiment or academic exercise.

Multiple submissions involve submitting academic work in a current course when academic credit for the work was previously earned in another course, when such submission is made without the current course instructor's authorization.

Misuse of academic materials includes: theft/destruction of library or reference materials or computer programs; theft/destruction of another student's notes or materials; unauthorized possession of another student's notes or materials; theft/destruction of examinations, papers, or assignments; unauthorized assistance in locating/using sources of information when forbidden or not authorized by the instructor; unauthorized possession, disposition, or use of examinations or answer keys; unauthorized alteration, forgery, fabrication, or falsification of academic records; unauthorized sale or purchase of examinations, papers, or assignments.

Complicity in academic dishonesty involves knowingly contributing to or cooperating with another's act(s) of academic dishonesty.

XIV. Important Dates to Remember

Academic Policies

The following policies, procedures, and deadlines pertain to all undergraduate students in the College of Liberal Arts and Sciences (CLAS). They are aligned with the Official University Academic Calendar found on the [Registrar's website](#).

Schedule Verification

It is each student's responsibility to verify that their official registration and schedule of courses is correct in UCDAccess (*not* Canvas) before courses begin and by the university census date. Failure to verify schedule accuracy is not sufficient reason to justify post-census date adds. Access to a course through Canvas is not evidence of official enrollment.

Email

Students must activate and regularly check their official CU Denver email account for university related messages. Note: Canvas is not the location to access your CU Denver email account. Log into <http://myemail.ucdenver.edu/>

Administrative Drops

Students may be administratively dropped if they do not meet the pre- and/or co-requisites for a course as detailed in the UCDAccess registration system. Students may also be administratively dropped from a course if the course syllabus articulates attendance expectations prior to census date and they do not meet those attendance expectations. Please note: this procedure does not apply to all courses and students should not rely upon it; if students plan to no longer complete a course, they are responsible to drop or withdraw from the course by the established deadlines.

Post-Census Date Adds and Late Withdrawals

Post-census date adds (i.e., adding a course after census date) require a written petition, verifiable documentation, and dean's approval via CLAS Advising. Late withdrawals (i.e., withdrawing from one or more full-semester courses after the withdrawal deadline but before the late withdrawal deadline) require a [Late Withdrawal Petition](#) submitted to CLAS Advising (NC 1030 – 303-315-7100). CLAS requires a reflective statement but does not require documentation. If petitioning to late-withdraw from individual courses, instructor signatures are required; if petitioning to late-withdraw from the entire semester, instructor signatures are not required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information.

Co-Requisites and Drops/Withdrawals

Students dropping a course with co-requisite(s) before or by census date must drop the course and co-requisite(s). After census date, students withdrawing from a course with co-requisite(s) before or by the withdrawal deadline must withdraw from the course and co-requisite(s). After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course or co-requisite(s) based on instructor permission and approval of a [Late Withdrawal Petition](#).

Waitlists

The Office of the Registrar notifies students via their CU Denver email account if they are added to a course from a waitlist. Students will have access to Canvas when they are on a waitlist, but this does not indicate that the student is officially enrolled or guaranteed a seat in the course. If a student is not enrolled in a course after waitlists are purged, instructor permission is required for the student to enroll in the course. The student must complete a [Late Add Form](#) and submit it to the Registrar's Office (SCB 5005) by census date in order to enroll in the course.

Applicable Forms

Schedule Adjustment Form

Submit to Registrar (SCB 5005)

Purpose:	Approval Signatures Required:	Dates:
Receive an academic credit hour overload	Student and CLAS Advising signatures	before Sep. 5 (5pm)
Receive a time conflict override	Student and instructor signatures	before Sep. 5 (5pm)
Designate a course pass/fail or no credit	Student signature	before Sep. 5 (5pm)
Withdraw from an intensive course before the withdrawal deadline	Student signature	Sep. 6 – Oct. 28 (5pm)

Late Add Form

Submit to Registrar (SCB 5005)

Purpose:	Approval Signatures Required:	Dates:
Add a course after the add deadline but before census date	Student and instructor signatures	Aug. 26 – Sep. 5 (5pm)

Post-Census Date Add Petition

Visit CLAS Advising (NC 1030) for more information

Purpose:	Approval Required:	Dates:
Petition to add one or more full-semester courses after census date (verifiable documentation required)	Submitted petitions are reviewed by the CLAS Assistant Dean	after Sep. 5

Late Withdrawal Petition

Submit to CLAS Advising (NC 1030)

Purpose:	Approval Signatures Required:	Dates:
Petition to late-withdraw from a course after the withdrawal deadline but before the late withdrawal deadline	Student and instructor signatures	Oct. 29 – Dec. 5 (5pm)
Petition to late-withdraw from <u>all courses</u> in the semester after the withdrawal deadline but before the late withdrawal deadline	Student signature	Oct. 29 – Dec. 5 (5pm)

Important Dates and Deadlines

August 20	Beginning of Semester – First day of classes.
August 26 (11:59 pm)	Add Deadline – Last day to add or waitlist a course using UCDAccess. After the add deadline but before census date, instructor permission on a Late Add Form is required to add courses.
August 27 (11:59 pm)	<p>Drop Deadline – Last day to drop a course without \$100 drop fee for each course dropped, including changing to a different section (e.g., a different day or time) of the same course. Students may drop courses using UCDAccess.</p> <p>No Adding of Courses is Permitted Today</p> <p>Waitlists Purged – All waitlists are eliminated today. Students should check their schedule in UCDAccess to confirm the courses in which they are officially enrolled. Canvas does not reflect official enrollment.</p>
Census Date	<p>September 5 (5 pm)</p> <p>Final Add Deadline (Instructor Permission Required) Last day to add full-semester courses. To add a full-semester course between the first add deadline and census date, instructor permission on a Late Add Form is required. Students may submit a completed Late Add Form to the Registrar's Office (SCB 5005). After census date, a written petition, verifiable documentation, and dean's approval via CLAS Advising (NC 1030 – 303-315-7100) are required to add a full-semester course. If a student's post-census date add petition is approved, the student will be charged the full tuition amount. College Opportunity Fund (COF) may not apply to courses added late, and these credits may not be deducted from students' lifetime hours.</p> <p>Final Drop Deadline Last day to drop full-semester courses with a financial adjustment. Each course dropped, including section changes, between the first drop deadline and census date generates a \$100 drop fee. Students may drop courses in UCDAccess. After census date, withdrawal from courses appears on transcripts with a grade of "W," and no financial adjustment is made. After census date but before the withdrawal deadline, students may withdraw from full-semester courses using UCDAccess (instructor permission is not required).</p> <p>Graduation Application Deadline Last day to apply for graduation. Undergraduates are expected to make an appointment to see their academic advisors before census date to apply for graduation. Graduate students must complete the Intent to Graduate and Candidate for Degree forms.</p> <p>Pass/Fail, No Credit Deadline – Last day to request No Credit or Pass/Fail grade for a course using a Schedule Adjustment Form.</p>
	<p>October 28 (11:59 pm)</p> <p>Withdrawal Deadline After census date, students may withdraw from full-semester courses using UCDAccess (instructor permission is not required). To withdraw from an intensive course, students may use a Schedule Adjustment Form. Withdrawal from courses appears on transcripts with a grade of "W" and no financial adjustment is made. After the withdrawal deadline but before the late withdrawal deadline, students may late-withdraw by submitting a Late Withdrawal Petition to CLAS Advising (NC 1030 – 303-315-7100). Contact CLAS Advising (NC 1030 – 303-315-7100) for more information. After census date, students withdrawing from a course with co-requisite(s) before or by the withdrawal deadline must withdraw from the course and co-requisite(s). After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course or co-requisite(s) based on instructor permission and approval of a Late Withdrawal Petition.</p>
	November 19 - 25 Fall Break – No classes. Campus open.
	<p>December 5 (5 pm)</p> <p>Late Withdrawal Deadline Last day to petition to late-withdraw from one or more full-semester courses. Students may petition to late-withdraw by submitting a Late Withdrawal Petition to CLAS Advising (NC 1030 – 303-315-7100). CLAS requires a reflective statement but does not require documentation. If petitioning to late-withdraw from individual courses, instructor signatures are required; if petitioning to late-withdraw from the entire semester, instructor signatures are not required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information. After the withdrawal deadline, until the late withdrawal deadline, students may be able to withdraw from a course with co-requisite(s) based on instructor permission and approval of a Late Withdrawal Petition. After the late withdrawal deadline (or after grades are posted, whichever is sooner), only retroactive withdrawals are considered and verifiable documentation is required. Contact CLAS Advising (NC 1030 – 303-315-7100) for more information on retroactive withdrawals.</p>
	December 10 - 15 Finals Week
December 15	End of Semester; Commencement Ceremony
December 20	Final Grades Available – Official grades available in UCDAccess and transcripts (tentative). Canvas does not display final grades.
Dec. 25 – Jan. 1	Winter Break – No classes. Campus closed.
January 31	Degrees Posted – Degrees posted for graduating students on transcripts.