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ASTR 1: General Astronomy

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Astronomy 1: General Astronomy

Course Information

Modality: Online - Asynchronous

Credits: 3

Course Description:

General Description

Astronomy 1 provides a broad and up-to-date survey of an extraordinary subject area, one that makes contact with many other science and engineering disciplines. Great discoveries in astronomy have been made in just the past few years and will be described in this course. We will examine the history of astronomy beginning in ancient times, how theories have been developed, and how evidence has been collected. Topics will include the night sky, observational tools, the Sun and stars, the Milky Way and distant galaxies, cosmology, and the potential for space travel and for alien life. By studying astronomy, we will acquire a better understanding of our place in the universe, and our responsibilities and opportunities to contribute to the health of the planet and its inhabitants.

Pathways

Astronomy 1 can be used to satisfy the Pathways Scientific World (SW) requirement in the Flexible Core.

College Option

Astronomy 1 may be used to satisfy the Pathways science requirement (SCI)

The *learning outcomes* for this course are those identified by CUNY and Queens College for 'general education' Pathways courses that meet the SW and SCI requirements. These are described at <https://gened.common.gc.cuny.edu/slos/>

Textbook:

Astronomy 2e – OpenStax

<https://openstax.org/details/books/astronomy-2e>

Topics List:

Week #	Chapter and Topic	Week #	Chapter and Topic
1	Chapter 1: Science and the Universe Section 2.1: Observing the Sky	8	Chapter 22: Stars from Adolescence to Old Age
2	Chapter 3: Orbits and Gravity	9	Chapter 23 The Death of Stars
3	Chapter 5: Radiation and Spectra	10	Exam 2: Chapters 16-23 Chapter 24: Black Holes
4	Chapter 6: Astronomical Instruments	11	Chapter 25: The Milky Way
5	Exam 1: Chapters 1, 2.1, 3, 5, & 6 Chapter 17: Analyzing Starlight	12	Chapter 26: Galaxies
6	Chapter 18: A Celestial Census Chapter 19: Celestial Distances	13	Chapter 27: Active Galaxies and Quasars
7	Sections 20.1-20.2: Between the Stars Chapter 21: The Birth of Stars and Search for Planets	14	Chapter 28. Evolution and Distribution of Galaxies

Prerequisite

There are no mathematics or science pre-requisites for this course, other than meeting the CUNY entrance requirements in these areas. No matter your background, you should be able to obtain a good grade in this course if you work hard.

Course Resources:

Blackboard:

All course material will be posted on Blackboard. Please check Blackboard regularly for announcements. All announcement are also sent out via email. Please make sure you check your email address associated with Blackboard regularly.

What to Expect When You're Taking This Course:

Homework on Blackboard:

There will be at minimum of one assessment per topic covered in the course. Late assignments are accepted, but point values decrease at a rate of 10% per day after the due date.

Discussion Boards:

There will be a discussion board for students to post. Every student will need to make a meaningful post that demonstrates an understanding of the material.

- Replied to the initial topic before the due date.
- Posting was responsive to question and substantive, posting comments or questions that enhanced the discussion, helped move the conversation forward. These may have included follow up questions, examples, or new perspectives.
- Posting showed ample evidence of having reviewed, or completed the relevant readings or assignments.
- Posting was constructive and differences of opinion expressed in a collegial manner

After making your post, you should make a meaningful comment on at least three of you classmate's posts.

A substantive reply meets these criteria:

- Posted responses before the due date.
- Posting was responsive and substantive, posting comments or questions that enhanced the discussion, or helped move the conversation forward. These may have included follow up questions, examples, or new perspectives.
- Posting provided evidence that the participant had thoughtfully read the classmate's posting.
- Posting showed ample evidence of having reviewed, or completed the relevant readings.
- Posting was constructive and differences of opinion expressed in a collegial manner.

In general, discussion boards are most useful when the community is actively engaged.

Examinations:

Exams will be deployed via Blackboard. The exams will be timed, but will be available to take anytime during exam day. Examinations will consist of both multiple choice questions, and questions that require short written responses. The final examination will cover all of the material presented in the course.

The exam timing is flexible, just be sure you have a stable internet connection and you are able to complete the exam in one sitting. Due to the accelerated nature of the course, make-up

exams may not be an option. Please look at the course calendar (posted on Blackboard) to make sure you will be able to take the exam on exam day.

Grading Rubric:

Course grades will be calculated using the following weights for each category:

Category	Weight (%)
Homework Assignments	50
Exams (Average of 2)	30
Final Exam (cumulative)	20

The letter grade for the course will be assigned, according to College Policy, as follows:

Grade	Score	Grade	Score	Grade	Score
A+	> 97	A	93 – 97	A-	90 – 92
B+	87 – 89	B	83 – 86	B-	80 – 82
C+	77 – 79	C	73 – 76	C-	70 – 72
D+	67 – 69	D	60 – 66	F	< 60

Special Services:

Queens College is ADA compliant. If you have a documented disability and anticipate that you will require accommodations, please contact me at your earliest convenience.

Academic Dishonesty and Classroom Etiquette:

The CUNY Academic Integrity Policy will be strictly adhered to. The policy can be found at:

<http://www.qc.cuny.edu/StudentLife/Documents/AcademicIntegrityPolicywithoutmemo.pdf>

Violations will be reported to the Office of Student Affairs, and will be subject to severe grading penalties. Disruptive classroom behavior will also result in grading penalties, and may also be reported. Be sure to use your electronic devices for class activities only, and to keep your devices in silent mode. To avoid disturbing the class, please arrive and depart on time, and keep conversation to a minimum and confined to matters relevant to the class.