



Instructional Services · Life and Natural Sciences · Astronomy

Stars and Galaxies-20422

ASTR-1403

RT 2022 Section 05 4 Credits 01/18/2022 to 05/15/2022 Modified 01/18/2022

Course Meetings

Course Modality

Online Any time

Meeting Days

by appointment only

Meeting Times

12:00 AM - 12:00 AM (Virtual professor meeting by appointment only)

Meeting Location

Online via internet or phone call

Welcome and Instructor Information

Course professor : Dr. Kumela Tafa

Email: kumela.tafa@hccs.edu

Office: E121A Scarella Building, Stafford.

Phone: (713) 718 - 5569

What's Exciting About This Course

Astronomy is a scientific discipline that studies the Universe. Our Sun, our home planet and all the other cosmic objects of our Solar System are among countless billions in the Universe. Studies of stars and planets have advanced the frontiers of our knowledge of the physical world, contributing greatly to the development of sciences and mathematics. Without astronomy, the modern world as we know it would not exist. Astronomy continues bringing new and exciting discoveries about the Universe. The information in this course will enable you to understand how scientists explore and explain the Universe.

My Personal Welcome

Welcome to Stars and Galaxies—I'm delighted that you have chosen this course! One of my passions is to know as much as I can about the Universe, and I look forward to sharing the excitement of astronomical discoveries with you. As you might find new ideas and facts to be challenging, I am available to support you. The fastest way to reach me is by email. I'm also available to tackle the questions during office hours. So please contact me whenever you have questions.

Preferred Method of Contact

You may reach me via email (preferably) or phone. Please use your student HCCS.edu email for communication. I will only send correspondence to your student account so please check it regularly as you are responsible for content of messages. Students may access email via Canvas or student sign-ins. Please allow sufficient time for a response. I will respond to emails within 24

hours Monday through Friday; I will reply to weekend messages at some time before or on Monday morning.

Office Hours

Monday, Wednesday, Friday, 9:30 AM to 11:00 AM, E121A Scarcella Building, Stafford Campus

Course Overview

An introduction to the present cosmological theories about the structure and evolution of the universe. A comparison with previous models since antiquity. A study of the celestial sphere, the constellations, and the motions in the sky. A study of gravity, light, radiation, optics, telescopes and spacecrafts. A survey of the stars, clusters, galaxies, superclusters, their properties, structure and evolution.

Requisites

A student in this course must be placed into GUST 0341 (or higher) in reading and placed into Math 0312 (or take Math 0308 as a co-requisite). If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

Department Website

[Astronomy | Houston Community College - HCC \(hccs.edu\)](#)

Core Curriculum Objectives (CCOs)

ASTR 1403 satisfies the Physical Science requirement in the HCCS core curriculum. The HCCS Astronomy Discipline Committee has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by demonstrating problem solving skills on homework and exams.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, and visual communication.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills by completing textbook reading assignments, completing assignments, and answering questions on quizzes and/or exams.

Since this is a lecture and lab course, it is as important and relevant for students to develop **Team Work** Core Curriculum skills.

Student Learning Outcomes and Objectives

Program Student Learning Outcomes (PSLOs)

1. To provide the student a basic and practical understanding of astronomy (basic qualitative and quantitative concepts, and systematic problem-solving strategies) and recognize its relevance in our daily lives.
2. To prepare students to meet with success in astronomy and other science courses when they transfer to four-year universities.
3. To prepare students for professional programs requiring astronomy.

Course Student Learning Outcomes (CSLOs)

Upon successful completion of ASTR 1403, the student will be able to:

1. Develop an appreciation for the nature of science and the scientific method.
2. Demonstrate an understanding of the modern theories about the origins, structure and evolution of our star, the Sun, and other stars, galaxies and the universe as a whole.
3. Understand properties of stars, and galaxies.
4. Apply the scientific method to the study of the universe, and in varying degrees, to the student's own interest and particular field of work or study.

Learning Objectives

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

- 1.1 Compare and contrast the size of the planet Earth to size of the solar system and the Milky way Galaxy.
- 1.2 Distinguish among astronomical unit, light year and parsec.
- 1.3 Name a few of the constellations, and relate brightness of stars to their size and distance.
- 1.4 Describe the cycles of the moon state the conditions for solar and lunar eclipses.
- 2.1 Explain the difference between heliocentric and geocentric models of the universe.
- 3.1 Demonstrate knowledge of the basic laws of physics that pertain to the study of stars and galaxies.
- 3.2 Classify stars according to the luminosity temperature (Hertzsprung-Russell) diagram.
- 3.3 Write a summary of the different stages in star development, including it's birth, life, and death.
- 3.4 Understand properties of galaxies and how these properties are determined.
- 4.1 Demonstrate knowledge of the nature of expansion of the universe and what can be learnt from its expansion about the past, the present and the future of the universe.
- 4.2 Use the tools of astronomy, such sky gazer and telescopes to measure the properties of celestial objects, and use that data to produce charts and graphs and solve problems.

Departmental Practices and Procedures

Department Specific Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

Program-Specific Student Success Information

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the chapter before coming to class
- Attending class in person
- Completing assignments
- Solving as many end-of-chapter problems as possible.
- Participating in Lab activities.

There is no short cut for success in this course; it requires studying the material and solving problems using the course objectives as your guide.

Instructional Materials and Resources

Instructional Materials

The [HCC Online Bookstore \(https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks\)](https://hccs.bncollege.com/shop/hccs-central/page/find-textbooks) provides searchable information on textbooks for all courses. Check with your instructor before purchasing textbooks because the book might be included in your course fees.

This course participates in the Houston Community College First Day Program. A discount has been applied to the required digital course materials. The discounted charge has been added to students' tuition and fee bills. Students will access course materials through a link in Canvas. Instructions for opting out of the HCC First Day Program are also posted in Canvas. Students who opt out will still be responsible for obtaining required course materials.

Other Instructional Resources

Courseware

There is no need to purchase additional course material.

Course Requirements

Assignments, Exams, and Activities

Type	Weight	Topic	Notes
Homework Assignment	15 %		Every Chapter covered will be followed by homework assignment.
Exams/Quizzes	45%	Exams	The course is divided into three parts and each part will be concluded by a major exam that contributed 15% each towards the final course grade.
Final Exam	20	Final Exam	The final exam is compulsory. It is comprehensive and contributes 20% towards the final course grade. Missing the final exam might result to obtain an incomplete or a failing grade in the course.
Laboratory work	20%	Lab activity	The course will have about 10 online lab and/or observations and the report and assignments will contribute 20% towards the final course grade.

Grading Formula

Grade	Range	Notes
A	90% - 100%	
B	80 % - 89%	
C	70% - 79%	

Grade	Range	Notes
D	60%-69%	
F	<60%	

* Instructor's Practices and Procedures

Incomplete Policy

In order to receive a grade of Incomplete ("I"), a student must have completed at least 80% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

Missed Assignments/Make-Up Policy

Examinations will consist of three non-cumulative regular exams (45%) plus a comprehensive final (20%) plus 20% from your laboratory activity. The other 15% points will come from homework assignments. There are no make-up for missed assignment and/or exams, therefore, make every effort to take assignments and exams on their scheduled date. However, if an exam is missed, the grade in the final exam will replace it, for at most one exam at the end of the course.

Academic Integrity

You are expected to be familiar with the College's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

[Student rights, policies and procedures \(https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/\)](https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/)

Attendance Procedures

As stated in the HCC Catalog, all students are expected to attend classes regularly. Students in DE courses, online anytime like this one, must log into their Canvas class and complete assignments on a timely manner or they will be counted as absent. Just like an on-campus class, your regular participation is required. Although it is the responsibility of the student to withdraw officially from a course, the professor also has the authority to block a student from accessing canvas, and/or to withdraw a student for excessive absences or failure to participate regularly. DE students who do not log into their Canvas class and complete their syllabus quiz before the Official Day of Record (it January 31, 2022, for this current session) will be automatically dropped for nonattendance. For Spring 2022, the last date to withdraw from the course is April 4, 2022. 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 do not believe in "weed out" classes, and I consider you to be much more than just a name or number! Note my email address above; if you need assistance, I'm here to help. Students desiring to withdraw from a class must do so by the above withdrawal date by filling out a withdrawal form at the registrar's office. After this date, instructors can no longer enter a grade of "W" for the course for any reason.

Student Conduct

Students are expected to maintain cordial and professional conduct as would be expected of an academic environment and as laid out in the Student Handbook. Please be considerate in your correspondence with the instructor and/or any classmates as well as in any in-person interaction. Academic integrity is also considered to be a part of appropriate conduct. Every student as well as the professor has the right to work in a healthy learning environment based on mutual respect and adherence to rules. Conduct unbecoming of such an environment will not be tolerated.

Instructor's Course-Specific Information

Add Content Here

Devices

No restriction on devices to use.

Faculty Statement about Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Ask questions on subject matter that is not clear from notes given or reading the material.
- Completing all assignments on time as scheduled
- Participating in class discussions

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)) for instructional delivery such as assignments, exams, and laboratory activities.

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

Social Justice Statement

Houston Community College is committed to furthering the cause of social justice in our community and beyond. HCC does not discriminate on the basis of race, color, religion, sex, gender identity and expression, national origin, age, disability, sexual orientation, or veteran status. I fully support that commitment and, as such, will work to maintain a positive learning environment based upon open communication, mutual respect, and non-discrimination. In this course, we share in the creation and maintenance of a positive and safe learning environment. Part of this process includes acknowledging and embracing the differences among us in order to establish and reinforce that each one of us matters. I appreciate your suggestions about how to best maintain this environment of respect. If you experience any type of discrimination, please contact me and/or the Office of Institutional Equity at 713-718-8271.

HCC Policies and Information

HCC Grading System

HCC uses the following standard grading system:

Grade	Grade Interpretation	Grade Points
A	Excellent (90-100)	4
B	Good (80-89)	3
C	Fair (70-79)	2
D	Passing (60-69), except in developmental courses.	1

Grade	Grade Interpretation	Grade Points
F	Failing (59 and below)	0
FX	Failing due to non-attendance	0
W	Withdrawn	0
I	Incomplete	0
AUD	Audit	0
IP	In Progress. Given only in certain developmental courses. A student must re-enroll to receive credit.	0
COM	Completed. Given in non-credit and continuing education courses.	0

Link to Policies in Catalog and Student Handbook

Here's the link to the HCC Catalog and Student Handbook: <https://catalog.hccs.edu/> (<https://catalog.hccs.edu/>)

In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

Link to HCC Academic Integrity Statement

<https://www.hccs.edu/student-conduct> (<https://www.hccs.edu/student-conduct>) (scroll down to subsections)

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<https://www.hccs.edu/campuscarry> (<https://www.hccs.edu/campuscarry>)

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID \(https://www.hccs.edu/email\)](https://www.hccs.edu/email) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the following link to access the HCC Office of Institutional Equity, Inclusion, and Engagement: <https://www.hccs.edu/eeo> (<https://www.hccs.edu/eeo>)

Ability Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <https://www.hccs.edu/accessibility> (<https://www.hccs.edu/accessibility>)

Title IX

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
(713) 718-8271
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu (<mailto:Institutional.Equity@hccs.edu>)

<https://www.hccs.edu/titleix> (<https://www.hccs.edu/titleix>)

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/> (<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>)

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online

- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Canvas Learning Management System

Canvas is HCC's Learning Management System (LMS), and can be accessed at the following URL:

<https://eagleonline.hccs.edu> (<https://eagleonline.hccs.edu>)

HCCS Open Lab locations may be used to access the Internet and Canvas. For best performance, Canvas should be used on the current or first previous major release of Chrome, Firefox, Edge, or Safari. Because it's built using web standards, Canvas runs on Windows, Mac, Linux, iOS, Android, or any other device with a modern web browser.

Canvas only requires an operating system that can run the latest compatible web browsers. Your computer operating system should be kept up to date with the latest recommended security updates and upgrades.

HCC Online Information and Policies

Here is the link to information about HCC Online classes, which includes access to the required Online Information Class Preview for all fully online classes: <https://www.hccs.edu/online/> (<https://www.hccs.edu/online/>)

Scoring Rubrics, Sample Assignments, etc.

Look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course. <https://eagleonline.hccs.edu/> (<https://eagleonline.hccs.edu/>)

Instructor and Student Responsibilities

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students during office hours, and before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](https://www.hccs.edu/studenthandbook) (<https://www.hccs.edu/studenthandbook>)

Sensitive or Mature Course Content

In this college-level course, we may occasionally discuss sensitive or mature content. All members of the classroom environment, from your instructor to your fellow students, are expected to handle potentially controversial subjects with respect and consideration for one another's varied experiences and values.

EGLS3

The EGLS³ ([Evaluation for Greater Learning Student Survey System](https://www.hccs.edu/egls3) (<https://www.hccs.edu/egls3>)) will be available for most

courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<https://www.hccs.edu/egls3> (<https://www.hccs.edu/egls3>)

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Student Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](https://www.hccs.edu/tutoring) (<https://www.hccs.edu/tutoring>) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <https://library.hccs.edu> (<https://library.hccs.edu/>).

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <https://www.hccs.edu/supplemental-instruction> (<https://www.hccs.edu/supplemental-instruction>)

Resources for Students:

<https://www.hccs.edu/covid19students> (<https://www.hccs.edu/covid19students>)

Basic Needs Resources:

<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/> (<https://www.hccs.edu/support-services/counseling/hcc-cares/basic-needs-resources/>)

Student Basic Needs Application:

<https://www.hccs.edu/basicneeds> (<https://www.hccs.edu/basicneeds>)

COVID-19

Here's the link to the HCC information about COVID-19:

<https://www.hccs.edu/covid-19> (<https://www.hccs.edu/covid-19>)

Instructional Modalities

Online Anytime (WW)

Traditional online course without scheduled meetings

Copyright Statement

In order to uphold the integrity of the academic environment and protect and foster a cohesive learning environment for all, HCC prohibits unauthorized use of course materials. Materials shared in this course are based on my professional knowledge and experience and are presented in an educational context for the students in the course. Authorized use of course materials is limited to personal study or educational uses. Material should not be shared, distributed, or sold outside the course without permission. Students are also explicitly forbidden in all circumstances from plagiarizing or appropriating course materials. This includes but is not limited to publically posting quizzes, essays, or other materials. This prohibition extends not only during this course, but after. Sharing of the materials in any context will be a violation of the HCC Student Code of Conduct and may subject the student to discipline, as well as any applicable civil or criminal liability. Consequences for unauthorized sharing, plagiarizing, or other methods of academic dishonesty may range from a 0 on the specified assignment and/or up to expulsion from Houston Community College. Questions about this policy may be directed to me or to the Manager of Student Conduct and Academic Integrity.

Course Calendar

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

When	Topic	Notes
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When	Topic	Notes			
		Week	Date	Chapters	Assignment Homework Due Dates All assignment are due at 11:30 PM on the due date
		1	01/18-01/22	CH 1: Charting the Universe	23-Jan
		2	01/23/ - 01/29	CH 2: The Copernican Revolution	29-Jan
		3	01/30 - 02/05	CH3: Radiation	3-Feb
				CH4: Spectroscopy	6-Feb
		4	02/06 - 02/12	CH5: Telescopes	10-Feb
				Exam I	02/11 - 02/12
		5	02/13 - 02/19	CH16: The Sun	19-Feb
		6	02/20 - 02/26	CH17: The Stars	26-Feb
		7	02/27 - 03/05	CH 18: The Interstellar Medium	1-Mar
				CH19: Star Formation	5-Mar
		8	03/06 - 03/12	CH 20: Stellar Evolution	9-Mar
				CH21: Stellar Explosions	12-Mar
		9	03/13 - 03/19		Spring Break
		10	03/20 - 03/26	CH 22: Neutron Stars and Galaxies	24-Mar
				Exam II	03/25 - 03/26
		11	03/27 - 04/02	CH 23: The Milky Way Galaxy	2-Apr
		12	04/03 - 04/09	CH 24: Galxies	6-Apr
				CH 25: Galaxies and Dark Matter	9-Apr
		13	04/10 - 04/23	CH 26: Cosmology	04/14, 04/15 - 04/17 Spring Holiday
		14	04/24 - 04/30	CH 27: The Early Universe	30-Apr
		15	05/01 - 05/07	CH28: Life in the Universe	5-May
				Exam III	05/06 - 05/07
		16	05/08 - 05/14	Final Exam	05/10 - 05/11
		*	Laboratory Schedule updates is in the works		

Additional Information

Departmental/Program Information

[Astronomy Page \(https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/astronomy/\)](https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/astronomy/)

Process for Expressing Concerns about the Course

If you have concerns about any aspect of this course, please reach out to your instructor for assistance first. If your instructor is not able to assist you, then you may wish to contact the Department Chair.

NATURAL SCIENCES DEPARTMENT ADMINISTRATION

Chair: Dr. Cyril Anoka, cyril.anoka@hccs.edu, 713 718 5638

Associate Chair: Dr. Kumela Tafa, kumela@hccs.edu, 713 718 5569

Administrative Assistant: Ms. Nettie Muhammad, nettie.muhammad@hccs.edu, 713-718-6050