Instructional Services · Life and Natural Sciences · Astronomy

Stars and Galaxies-13158

ASTR-1303

RT 2022 Section 8002 3 Credits 08/23/2021 to 12/12/2021 Modified 08/26/2021

Course Meetings

Course Modality

Online - Asynchronous.

For Course Modality: (*see HCC Policies and Information > Instructional Modalities)*

Meeting Days

Online - Asynchronous

Meeting Times

12:00 AM - 12:00 AM

Meeting Location

Online

Welcome and Instructor Information

Instructor: Dr. Kumela Tafa

Email: kumela.tafa@hccs.edu
Phone: (713)718-5569

What's Exciting About This Course

Astronomy is the study of the entire universe, including objects such as planets, stars and entire galaxies, as well as smaller objects and gas clouds. It studies how we describe the motion of the satellites and planets. It looks at how the Galaxies, Stars and Planets were formed. It is amazing that the universe works in a way that we, as curious human beings, can describe, explain and even predict how phenomena occur. Certainly, this sounds exciting to me and hopefully to you as well!

My Personal Welcome

Welcome to Astronomy 1303—I'm delighted that you have chosen this course! One of my passions is to know as much as I can about the universe around me, its interconnectedness, simplicity and beauty. We will learn this together in an online mode of instruction in a pretty fast pace. I am confident that you are all ready and capable of learning this introductory course in the given time frame. I truly believe that at the end of this course your view of the universe will be completely different than when you are reading this syllabus for the first time.

As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The fastest way to reach me is via my canvas email. The best way to really discuss issues is in person (virtually via Kaltura, WebEx, or Teams) and I'm

available most of the time during posted office hours to tackle your questions. My goal is for you to walk out of the course with a better understanding of yourself and the universe around you. So please contact me by email or phone whenever you have a question.

Preferred Method of Contact

You may reach me via email (preferably on canvas inbox) 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 some time before or on Monday morning.

Office Hours

Monday, Tuesday, Wednesday, Thursday, 9:30 AM to 10:45 AM

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 spacecraft. A survey of the stars, clusters, galaxies, superclusters, their properties, structure and evolution.

Requisites

A student enrolled in ASTR 1303 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 1303 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.

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 1303, 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.

Student 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) 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.

The book is included in a package that contains the text as well as an access code and are found at the HCC Bookstore (https://hccs.bncollege.com/shop/hccs-central/home). You may either use a hard copy of the book, or rent the e-book from Pearson. Order your book here: HCC Bookstore (https://hccs.bncollege.com/shop/hccs-central/home)

Temporary Free Access to E-Book

Here is the link to get temporary free access to a digital version of the text for fourteen days:

<< [add link] >>

Other Instructional Resources

Courseware

All course material is related to information from the textbook. Homework assignments will be posted to canvas.

Atronomy Today

Author: Eric Chaisson
Publisher: Pearson
Edition: 9/e

Astronomy Today

Author: Eric Chaison
Publisher: Pearson
Edition: 9/e
ISBN: 9780134553955
Availability: Campus Bookstore

Course Requirements

Assignments, Exams, and Activities

Type	Weight	Topic	Notes
Chapter homework	15%		These are chapter homework sets on material from the chapter.

Type	Weight	Topic	Notes
Exams/Quizzes	60%		These are module exams after each module.
Final Exam	25%		Comprehensive final exam.

Grading Formula

Grade	Range	Notes
A	90%-100%	
B	80% - 89%	
C	70%-79%	
D	60%-69%	
F	< 60 %	

* Instructor's Practices and Procedures

Incomplete Policy

Add Content Here

Missed Assignments/Make-Up Policy

Homework assignments are to be turned in as scheduled on canvas the day they are due to be counted for full credit. Late homework is not accepted.

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):

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/)

Scholastic Dishonesty will result in a referral to the Dean of Student Services.

Attendance Procedures

As stated in the HCC Catalog, all students are expected to attend classes regularly. Students

in DE courses must log into their Canvas class 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 is December 16, for this mini session*) will be automatically dropped for nonattendance.

For this regular term session, Fall 2021, the last date to withdraw from the course is **October 29, 2021**. 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

See above.

Devices

No restriction for this online course. However, you need a reliable internet to successfully complete your course online.

Faculty Statement about Student Success

Academic success a result perseverance and hard work. Plan you work and complete your assignments on time. Before you do any assignment read the material and understand the concept/s.

Faculty-Specific Information Regarding Canvas

This course section will use Canvas (https://eagleonline.hccs.edu (https://eagleonline.hccs.edu)) to supplement in-class assignments, exams, and 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
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 Student Handbook

Here's the link to the HCC Student Handbook https://www.hccs.edu/resources-for/current-students/student-handbook/ (https://www.hccs.edu/resources-for/current-students/student-handbook/) 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/resources-for/faculty/student-conduct-resources-for-faculty/ (https://www.hccs.edu/resources-for/faculty/student-conduct-resources-for-faculty/)

Campus Carry Link

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

https://www.hccs.edu/departments/police/campus-carry/ (https://www.hccs.edu/departments/police/campus-carry/)

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/resources-for/current-students/student-e-maileagle-id/) and activate it now. You may also use Canvas Inbox to communicate.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (https://www.hccs.edu/departments/institutional-equity/ (https://www.hccs.edu/departments/institutional-equity/))

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/support-services/ability-services/ (https://www.hccs.edu/support-services/ability-services/)

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)

http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/ (http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/)

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/login/ldap (https://eagleonline.hccs.edu/login/ldap)

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/resources-for/current-students/student-handbook/)

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 EGLS^3 (Evaluation for Greater Learning Student Survey System (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)) 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. EGLS^3 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/resources-for/current-students/egls3-evaluate-your-professors/ (https://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/)

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/resources-for/current-students/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/resources-for/current-students/supplemental-instruction/ (https://www.hccs.edu/resources-for/current-students/supplemental-instruction/).

Resources for Students:

https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/resources-for-students/)

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://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH (https://hccs.co1.qualtrics.com/jfe/form/SV_25WyNx7NwMRz1FH)

COVID-19

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

https://www.hccs.edu/resources-for/current-students/communicable-diseases/ (https://www.hccs.edu/resources-for/current-students/communicable-diseases/)

Instructional Modalities

In-Person (P)

Safe, face-to-face course with scheduled dates and times

Online on a Schedule (WS)

Fully online course with virtual meetings at scheduled dates and times

Online Anytime (WW)

Traditional online course without scheduled meetings

Hybrid (H)

Course that meets safely 50% face-to-face and 50% virtually

Hybrid Lab (HL)

Lab class that meets safely 50% face-to-face and 50% virtually

🗓 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.

Week	Date	Chapters	Assignment Homework due dates.
1	08/23-08/29	CH1: Charting the Universe	8/30/21 23:30
		CH2:The Copernican Revolution	9/31/2021 23:30
2	08/30 - 09/05	CH3:Radiation	9/4/21 23:30
3	09/06-09/12	CH4:Spectroscopy	9/10/21, 23:30
4	09/13 -09/19	CH5:Telescopes	09/17/21, 23:30
		Exam I	**09/19 - 09/20 23:30**
5	09/20 - 09/26	CH16: The Sun	9/26/21 23:30
6	09/27 - 10/03	CH17:The Stars	10/3/21 23:30
7	10/04 - 10/10	CH18: The Interstellar Medium	10/10/21 23:30

8	10/11 - 10/17	CH19: Star formation	10/15/21 23:30
9	10/18 - 10/24	CH20 : Stellar Evolutions	10/17/21 23:30
		CH21: Stellar Explosions	10/22/21 23:30
10	10/25 - 10/31	CH22: Neutron Stars and Black Holes	10/24/21 23:30
		Exam II	**10/31 -11/01 , 23:30**
11	11/01 - 11/07	CH23: The Milky Way Galaxy	11/10, 23:30
12	11/08 - 11/14	CH24The Galaxies	11/16, 23:30
13	11/15 - 11/21	CH25 Galaxies and dark Matter	11/20, 23:30 PM
14	11/22 - 11/28	CH26: Cosmology	11/23, 23:30 PM
15	11/29 - 12/05	CH27:The Early Universe	11/29, 23:30 PM
		Exam III	**11/30 - 12/1 , 12/1 23:30**
16	12/06 - 12/12	**Final Exam**	**12/06/12/07, 23:30**

Additional Information

Departmental/Program Information

Under Construction

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.

Department Chairman: Dr. Cyril Anoka, email: Cyril.anoka@hccs.edu, Tel (713) 718 -5638

Associate Chairman: Dr. Kumela Tafa : Kumela.tafa@hccs.edu, (713) 718 -5569