



## **SYLLABUS**

**Spring 2017**

### **Online Course: SCIE 3304, Sections 006 (ASTRONOMY)**

This syllabus provides a general plan for the course; if there are any deviations, you will be notified.

#### **Instructor's Information**

**Name:** Dr. Nilakshi Veerabathina (My on-campus students address me as Dr. Nila; pronounced as Neela)

**Telephone:** 682-999-8571 (Try to call only during business hours, and please do not leave any voice messages. The phone is not well equipped to receive the voice messages.)

**Email:** Please use the email option available on the Blackboard. I will be checking my e-mails until about 5 pm every working day and occasionally over the weekends. I will try to get back to you within 24 hours.

**Mailbox:** 19059

**Office Hours:** Since this course is online, you will most easily find me by email. I would encourage you to see me if you happen to come to UT Arlington campus. I am located in room 120c Science Hall. You might like to check with me about my availability before coming though.

#### **Course Duration**

Spring 2017 dynamic dated semester: From Monday, 01/16/17 till Friday, 4/28/17

#### **Required On-Campus Meetings**

**None.** The course will be available online 24x7 from the start of the semester through the end. You are never required to be online on a certain day or at a certain time.

#### **Live Webinars**

Depending on the need, there will be a two to three synchronous live webinars in the course via Blackboard Collaborate. The live webinars will help you to see and hear your professor. The attendance in Webinars is encouraged though not mandatory. If you are not able to attend the webinars, you will have the option of watching the recordings that will be posted on the Blackboard after the live webinar. The **first webinar** will be on **Thursday, January 19<sup>th</sup> at 2 pm CT**. The other webinars will be spread over the duration of semester. You will receive

instructions and more information about the webinars via e-mail and announcement as we draw closer to each webinar.

### **Prerequisites**

While there are no formal prerequisites, a familiarity with high school mathematics is needed.

### **Description of the Course**

This is a one semester course on astronomy with an emphasis on celestial motions, phases of moon, eclipses, history of astronomy, gravity, electromagnetic radiation, telescopes, and physical properties of the planets, asteroids, meteoroids, comets, and the discovery of extrasolar planets, study of the Sun as a star, measurement of different properties of stars, birth, evolution and death of stars, strange states of matter (neutron stars and black holes), Milky Way Galaxy, study of the Universe beyond our Galaxy, formation and evolution of galaxies. As we consider more distant objects, such as active galaxies and quasars, we move backwards in time, ultimately arriving at Big Bang. Overall, the course takes you to a journey from the farthest reaches of the Universe back to our home, the Earth.

### **Learning Objectives:**

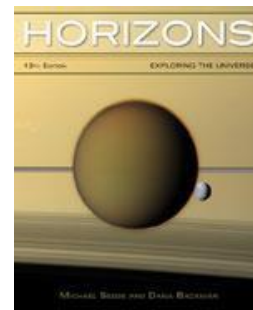
On the completion of this course students should be able to

- demonstrate the methods and the advantages of advanced technology that astronomers use to obtain information about celestial objects.
- describe the nature of scientific research and process of science in the fields of Physics and Astronomy.
- explain the basic concepts of Physics, such as gravity, nature of light, electromagnetic spectra laws of motion, planetary motions and thermal radiation etc.
- demonstrate how the universe works on a larger scale starting from our solar system to the stars to our galaxy to the larger structures in the universe.
- analyze our place in the universe and apply it to understand the possible existence of extra-terrestrial life in the universe.
- demonstrate the ability to utilize technology in a variety of forms, and express their scientific ideas in clear, logical, organized, and concise ways.

### **Required Course Material**

**Text Book:** Horizons: Exploring the Universe, 13th Edition by Michael A. Seeds; Dana Backman, (Published by Cengage Learning)

And an **Access Code** for Enhanced Webassign



## Options to buy:

You can buy both the printed text book and the access code together as a bundle from UTA bookstore (<http://uta.bkstr.com>) or publisher's website. The ISBN for the bundle/e-pack is ISBN-13: 978-1-305-52649-5 (Here is the link: [ePack: Horizons: Exploring the Universe, 13th + Enhanced WebAssign Instant Access for Astronomy, Single-Term Courses, 13th Edition](#))

or

You can just buy the WebAssign Instant access code (ISBN-13: 978-1-285-85842-5). This code includes the e-book. If you are comfortable in using an e-book, you do not need to purchase the printed version of the book. This option will save you money. (Here is the link: [Enhanced WebAssign Instant Access for Astronomy, Single-Term Courses, 1st Edition](#))

**Important:** If you purchase a used book online, or borrow a book, you will still need the access code for the Enhanced WebAssign. In any case, make sure that you have the WebAssign access code for the course. You will need this for weekly chapter tutorials and quizzes. Follow the directions described below to get access to WebAssign. There also you get the option of buying the access code with or without the book.

### Access to WebAssign

On the left panel of Blackboard, right click on the "WebAssign Quizzes and Tutorials" option to open it in a new window. Since you do not have the access code yet, you can choose the option of "Continue with my trail period". **You can use the WebAssign and the e-book free of cost without the access code for two weeks. Hence, you can start your course work immediately.**

For more help about how to register on WebAssign read the instructions at

[http://www.webassign.net/manual/WA\\_Student\\_Quick\\_Start.pdf](http://www.webassign.net/manual/WA_Student_Quick_Start.pdf)

### Exams and Grading

The grading will include the following elements of the course.

	<b>Course Element</b>	<b>Weight</b>
1.	Chapters Quizzes on WebAssign	10 %
2.	Chapters Tutorials on WebAssign	15 %
3.	Biweekly Discussions on Blackboard	10 %
4.	Tests (best 2 of 3) on Blackboard	40 %
5.	Final Exam on Blackboard	25 %
	Total	100 %

The grading scale would be as follows.

90-100: A

80-89: B

70-79: C

60-69: D

Less than 60: F (Fail)

### **Description of Course Elements**

#### **1. Chapters Reading Quizzes on WebAssign – 10% course grade**

There will be in all 20 quizzes from a total of 20 Chapters that are in the text book. These quizzes are available through the WebAssign option on the Blackboard. Each quiz will typically consist of 10 Multiple Choice Questions (MCQs). Quizzes will be untimed but they should be finished before the due date for that particular chapter. Each Quiz can either be completed in a single sitting or it can be done in parts. All quizzes should be easy once you have read the book and Power Point slides thoroughly. These reading quizzes are **open book** quizzes.

*No credit will be given if responses to the quiz are given after the due date.* You can see the quiz score immediately after you finish the quiz, but the correct answers key will be available only after the due date. Out of the total number of quizzes taken during the course, the *two with the lowest score will be dropped* when counting its contribution to the final grade. Quizzes will contribute 10% towards the final grade in the course.

**Note:** “Introduction to WebAssign” quiz that you will see on the website is to get familiarized with the system. That is the first required quiz you need to take. It will not be graded.

#### **2. Chapters Tutorials (homework) on WebAssign – 15% course grade**

There will be tutorial sections based on each chapter. For a total of 20 chapters that will be covered in the course there will be roughly 20 tutorials. These tutorials are also available through the WebAssign option on Blackboard. Tutorials will be untimed but they should be finished before the due date for that particular chapter. For each question in the Tutorial, you can have maximum two attempts. You can finish the tutorial in one sitting or in parts before the due date. The tutorials are **open book**.

*No credit will be given for work submitted after the due date.* As with the reading quizzes, for tutorials the *two with the lowest score will be dropped* when calculating the final grade. Tutorials contribute 15% of the final grade.

### 3. Discussions on Blackboard – 10% course grade

The discussions are biweekly. There will be a total of 7 discussion topics for the course. *To get the full credit for the discussion you must submit your own response and also reply to at least one other student's post.* Students need to submit the original response for the discussion topic as soon as they can or by the end of first week. This way other students will get sufficient time to read the post and respond accordingly the following week before the deadline. The maximum point for each discussion is 100. Up to 60 points will be given for your own posting based on its quality, and 40 points for your critical and thoughtful comment/answer to at least one posting. *While you only need to reply to one person, I strongly encourage you to participate more by replying to more posts. It will help deepen your thoughts on the discussion topic, and also increase your chances of getting a high grade in the discussion.*

**Suggestions and tips:** Your responses to other students must be well thought and researched that further enhances the quality of the on-going discussion and make others think critically. Just saying "me too", "I agree", "It's awesome", "I like it", "I never thought of it before" etc. is not enough for the grading point of view. You can supplement these phrases with more examples and ideas to get the credit. You can explain in scientific terms WHY do you agree or not agree with the other student's posting. It would be useful if you imagine that you are having a thoughtful conversation and critically discussing the topic with a person sitting next to you.

***No credit will be given to responses posted after the deadline.*** These discussions contribute a total of 10% to the final grade.

### 4. Tests (Best 4 of 5) on Blackboard– 40 % course grade

A Total of 5 tests will be held in the course. These tests will be available on Blackboard. In calculating the contribution of tests towards the final grade, the best four out of five will be used. If you are not able to take a test for some reason, you will receive a zero and that will be your dropped test. Since I drop the lowest test grade, ***no makeup tests will be given.*** Tests contribute the highest percentage towards the final grade. This will show exactly what you are learning in the course.

Each test will be ***timed***. You will have ***50 minutes*** to record your responses for each test. Each test will have ***50 Multiple Choice Questions*** (MCQs). All tests will be **closed book**. Once the test is started you have to complete it fully, you can't leave it halfway and come back later. So, please make sure that you have suitable time and no other activities scheduled when you take the test. Also before taking the test, make sure your computer and internet connection are working properly. The test can only be taken once. The exact dates, timings etc. are mentioned in the "Schedule" section of the course. Mark your calendar in advance for the tests dates.

The coverage of the chapters in each test is as follows,

Test 1 – Chapters 1, 2, 3, 4

Test 2 – Chapters 5, 6, 7

Test 3 – Chapters 8, 9, 10, 11

Test 4 – Chapters 12, 13, 14

Test 5 – Chapters 15, 16, 17

For each test, 50 questions will be distributed almost equally on all chapters listed above for that test. final grade.

In calculating the final grade, four of the best scored tests from all five taken will contribute 40% to the final grade.

### **5. Final Exam on Blackboard- 25% course grade**

The Final Exam is mandatory and will be available on the Blackboard. The Final Exam will have a total of **100 multiple choice questions** to be answered. Out of the 100 questions, the first 50 questions will be from chapters 16, 17, 18, 19 and 20. The rest of the 50 questions will be from chapters 1 to 15. The Final Exam will be **timed**. You will have a **total of 100 minutes** to answer all the questions. The Final exam can only be taken once and it will be closed book. Once the exam is started you have to complete it fully, you can't leave it halfway and come back later. So, please make sure that you have suitable time and no other activities scheduled when you take the Final Exam. Also before taking the final exam, make sure your computer and internet connection are working properly. The Final Exam will contribute 25% to the final grade.

**Note:** The tests and the final are **closed book exams**. In addition, you will be required to use the **Respondus Lockdown Browser with webcam** to take the tests. I will send more information about it as we get closer to Test 1.

### **Netiquettes (stands for Net or Online Etiquettes)**

At UT Arlington we emphasize and try to maintain the highest ethical standards in personal and professional communication. Treat your online class the same way you would the face-to-face class. Written yelling, shouting or demeaning of classmates' postings and ideas will NOT be tolerated. Try to be polite when communicating with the instructor or the classmates. Use of racial or ethnic slurs, flaming, or derogatory statements are grounds for disciplinary actions.

### **Academic Dishonesty/ Plagiarism**

Even though this is an online course, you are just as bound to the university's academic dishonesty policy as the students in face-to-face on-campus courses.

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline may include suspension or expulsion from the University. "Scholastic

dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts." (Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22)

### **E-Culture Policy**

The University of Texas at Arlington has adopted the University email address as an official means of communication with students. Through the use of email, UT-Arlington is able to provide students with relevant and timely information, designed to facilitate student success. In particular, important information concerning registration, financial aid, payment of bills, and graduation may be sent to students through email.

All students are assigned an email account and information about activating and using it is available at [www.uta.edu/email](http://www.uta.edu/email). New students (first semester at UTA) are able to activate their email account 24 hours after registering for courses. There is no additional charge to students for using this account, and it remains active as long as a student is enrolled at UT-Arlington. Students are responsible for checking their email regularly.

### **Drop Policy**

Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/ses/fao>).

### **Student Feedback Survey**

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory will be asked to complete an online Student Feedback Survey (SFS) about the course and how it was taught. Instructions on how to access the SFS system will be sent directly to students through MavMail approximately 10 days before the end of the term. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback data is required by state law; student participation in the SFS program is voluntary.

## **Student Support Services Available**

The University of Texas at Arlington supports a variety of student success programs to help you connect with the University and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance academically, personally, or socially should contact the Office of Student Success Programs at 817-272-6107 for more information and appropriate referrals.

## **Americans with Disabilities Act**

UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD)**. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

**The Office for Students with Disabilities**, [www.uta.edu/disability](http://www.uta.edu/disability) or calling 817-272-3364.

**Counseling and Psychological Services, (CAPS)** [www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at [www.uta.edu/disability](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

## **Non-Discrimination Policy**

The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit [uta.edu/eos](http://uta.edu/eos).

## **Title IX**

The University of Texas at Arlington (“University”) is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. *For*



information regarding Title IX, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or [jmhood@uta.edu](mailto:jmhood@uta.edu).

### **The IDEAS Center**

IDEAS center at 2<sup>nd</sup> Floor of Central Library offers **free** tutoring to all students with a focus on transfer students, sophomores, veterans, and others undergoing a transition to UT Arlington. To schedule an appointment with a peer tutor or mentor email [IDEAS@uta.edu](mailto:IDEAS@uta.edu) or call (817) 272-6593.

### **The English Writing Center (411 LIBR)**

The Writing Center Offers free tutoring in 20-, 40-, or 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Their hours are 9 am to 8 pm Mon.-Thurs., 9 am-3 pm Fri. and Noon-6 pm Sat. and Sun. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, workshops, and specialized services for graduate students are also available. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information on all our programs and services.

The Library’s 2<sup>nd</sup> floor Academic Plaza offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Please check the link for more information <http://library.uta.edu/academic-plaza>

### **Schedule**

The “**Schedule**” below contains the overall outline of the course, the timelines and due dates for each element of the course. Week is defined from **Monday to Sunday**. Carefully check into the schedule and mark your calendar accordingly.

<b>Week</b>	<b>Dates</b>	<b>Read from the Text Book - - Horizons: Exploring the Universe</b>	<b>Discussion Topics to Participate in the Discussion Forums on Black Board</b>	<b>Chapter Tutorials on WebAssign</b>	<b>Chapter Quizzes on WebAssign</b>	<b>Due By</b>
<b>1</b>	Jan 16 to Jan 22	Get familiar with book and WebAssign	Discussion #0: Introductions (Not graded)		Intro to WebAssign	Sunday, Jan 22 <sup>nd</sup> 11 pm (CT)
<b>2</b>	Jan 23 to Jan 29	Chap 1-2	Discussion #1 (How Big; How Small)	Chap 1 Tutorial Chap 2 Tutorial	Chap 1 Quiz Chap 2 Quiz	Sunday, Jan 29 <sup>th</sup> 11 pm (CT)

<b>3</b>	Jan 30 to Feb 5	Chap 3-4		Chap 3 Tutorial  Chap 4 Tutorial	Chap 3 Quiz  Chap 4 Quiz	Sunday, Feb 5 <sup>th</sup>  11 pm (CT)
<b>Test 1 (Timed: 50 minutes); Chap 1-4; (It can be taken only once on the Blackboard.) Available from Friday, Feb 3<sup>rd</sup>, 12 am to Monday, Feb 6<sup>th</sup>, 11 pm (CT)</b>						
<b>4</b>	Feb 6 to Feb 12	Chap 5-6	Discussion #2 (Astronomy Picture of Day (APOD))	Chap 5 Tutorial  Chap 6 Tutorial	Chap 5 Quiz  Chap 6 Quiz	Sunday, Feb 12 <sup>th</sup>  11 pm (CT)
<b>5</b>	Feb 13 to Feb 19	Chap 7		Chap 7 Tutorial	Chap 7 Quiz	Sunday, Feb 19 <sup>th</sup>  11 pm (CT)
<b>Test 2 (Timed: 50 minutes); Chap 5-7; (It can be taken only once on the Blackboard.) Available from Friday, Feb 17<sup>th</sup>, 12 am to Monday, Feb 20<sup>th</sup>, 11 pm (CT)</b>						
<b>6</b>	Feb 20 to Feb 26	Chap 8	Discussion #3	Chap 8 Tutorial	Chap 8 Quiz	Sunday, Feb 26 <sup>th</sup>  11 pm (CT)
<b>7</b>	Feb 27 to Mar 5	Chap 9-10		Chap 9 Tutorial  Chap 10Tutorial	Chap 9 Quiz  Chap 10 Quiz	Sunday, Mar 5 <sup>th</sup>  11 pm (CT)
<b>8</b>	Mar 6 to Mar 12	Chap 11	Discussion #4	Chap 11Tutorial	Chap 11 Quiz	Sunday, Mar 12 <sup>th</sup>  11 pm (CT)
<b>Test 3 (Timed: 50 minutes); Chap 8-11; (It can be taken only once on the Blackboard.) Available from Friday, Mar 10<sup>th</sup>, 12 am to Monday, Mar 13<sup>th</sup>, 11 pm (CT)</b>						
<b>9</b>	Mar 13 to Mar 19	Chap 12-13		Chap 12Tutorial  Chap 13Tutorial	Chap 12 Quiz  Chap 13 Quiz	Sunday, Mar 19 <sup>th</sup>  11 pm (CT)
<b>10</b>	Mar 20to Mar 26	Chap 14	Discussion #5	Chap 14Tutorial	Chap 14 Quiz	Sunday, Mar 26 <sup>th</sup>  11 pm (CT)
<b>Test 4 (Timed: 50 minutes); Chap 12-14; (It can be taken only once on the Blackboard.) Available from Friday, Mar 24<sup>th</sup>, 12 am to Monday, Mar 27<sup>th</sup>, 11 pm (CT)</b>						
<b>11</b>	Mar 27 to Apr 2	Chap 15-16		Chap 15Tutorial  Chap 16 Tutorial	Chap 15 Quiz  Chap 16 Quiz	Sunday, Apr 2 <sup>nd</sup>  11 pm (CT)

<b>12</b>	Apr 3 to Apr 9	Chap 17	Discussion #6	Chap 17 Tutorial	Chap 17 Quiz	Sunday, Apr 9 <sup>th</sup> 11 pm (CT)
<b>Test 5 (Timed: 50 minutes); Chap 15-17; (It can be taken only once on the Blackboard.) Available from Friday, Apr 7<sup>th</sup>, 12 am to Monday, Apr 10<sup>th</sup>, 11 pm (CT)</b>						
<b>13</b>	Apr 10 to Apr 16	Chap 18-19	---	Chap 18 Tutorial Chap 19 Tutorial	Chap 18 Quiz Chap 19 Quiz	Sunday, Apr 16 <sup>th</sup> 11 pm (CT)
<b>14</b>	Apr 17 to Apr 23	Chap 20	Discussion #7	Chap 20 Tutorial	Chap 20 Quiz	Sunday, Apr 23 <sup>rd</sup> 11 pm (CT)
<b>Final Exam (Timed: 100 minutes); Chap 1-20; (It can be taken only once on the Blackboard.) Available from Monday, Apr 24<sup>th</sup>, 12 am to Thursday, Apr 27<sup>th</sup>, 11 pm</b>						

**Note:** The same schedule is also provided as a separate one page pdf file that you might like to print out and paste on some visible place in your room to keep the continuous track of your course work.

### Live by the HONOR CODE

*I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence. I promise that I will submit only work that I personally create or that I contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold*

### Helplines

For Blackboard related technical problems, e-mail [helpdesk@uta.edu](mailto:helpdesk@uta.edu) , call 817.272.2208, or use their 24/7 support service available through Blackboard's main page.

For WebAssign related problems and issues, email via [http://webassign.force.com/wakb2/?cu=1&fs=ContactUs&l=en\\_US](http://webassign.force.com/wakb2/?cu=1&fs=ContactUs&l=en_US) or call (800) 955-8275

For course related issues, please contact me via Blackboard e-mail option