HORRY GEORGETOWN TECHNICAL COLLEGE

INSTRUCTIONAL PACKAGE

AST 102
Stellar Astronomy

Effective Term
Fall 2023/Spring 2024/Summer 2024

INSTRUCTIONAL PACKAGE

Part I: Course Information

Effective Term: 2023-2024

COURSE PREFIX: AST 102 COURSE TITLE: Stellar Astronomy

CONTACT HOURS: 3-3 CREDIT HOURS: 4

RATIONALE FOR THE COURSE:
AST 102 includes a study of stars, star structures, galaxies and galaxy clusters. It allows students to complete an in-depth evaluation of scientific information presented, thus preparing them for future scientific careers.

COURSE DESCRIPTION:
This course is a descriptive survey of the universe with emphasis on basic physical concepts and galactic and extra- galactic objects. Related topics of current interest are included in the course.

PREREQUISITES/CO-REQUISITES:
((Credit level MAT 101 Minimum Grade of C or Credit level MAT 101 Minimum Grade of TC or Credit level MAT 102 Minimum Grade of C or Credit level MAT 102 Minimum Grade of TC or Credit level MAT 110 Minimum Grade of C or Credit level MAT 110 Minimum Grade of TC or Credit level MAT 120 Minimum Grade of C or Credit level MAT 120 Minimum Grade of TC or Credit level MAT 155 Minimum Grade of C or Credit level MAT 155 Minimum Grade of TC) or (New ACCUPLACER Arithmetic 220 or New ACCUPLACER Adv Algebra 200 or New SAT Mathematics 420 or ACT Math 15))

*__Online/Hybrid__ courses require students to complete the DLi Orientation Video prior to enrolling in an online course.

REQUIRED MATERIALS:
Please visit the BOOKSTORE online site for most current textbook information.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

ADDITIONAL REQUIREMENTS:

Registration with Starry Night Learning Platform is a required component of this course.

For hybrid/online students only: each student will be required to view an Introductory Lecture during the first week of class. This presentation can be found on the course homepage in D2L under News. After viewing the presentation, all online students must complete the Attendance Verification quiz, which can be found under the dropdown assignment menu. A student will not be considered officially enrolled in the course until the presentation has been viewed and the quiz completed with a 100% score. Failure to view the presentation and take the quiz before midnight on the last day to add/drop classes will result in the student being automatically dropped from the course.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's learning management system (LMS) used for course materials.
Access to myHGTC portal for student self-services.
College email access – this is the college's primary official form of communication.

STUDENT IDENTIFICATION VERIFICATION

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit Online Netiquette.

ACADEMIC DISHONESTY:

All forms of academic dishonesty, as outlined in the Student Code in the HGTC catalog, will NOT be tolerated and will result in disciplinary action. Anyone caught cheating or committing plagiarism (Defined in the code as: "The appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit") will be given a grade of a zero for that assignment and reported to the Senior VP of Academic Affairs, in accordance with the student handbook. A second offense will result in the student being withdrawn from the course with a "WF" and charges being filed with the Chief Student Services Officer.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

Chapter 15 – The Sun: A Garden-Variety Star

Explain how the composition of the Sun differs from that of Earth.
Describe the various layers of the Sun and their functions.
Explain what happens in the different parts of the Sun's atmosphere.
Describe the sunspot cycle and, more generally, the solar cycle.
Explain how magnetism is the source of solar activity.
Describe the various ways in which the solar activity cycle manifests itself, including flares, coronal mass ejections, prominences, and plages.
Explain what space weather is and how it affects Earth.

Chapter 16 – The Sun: A Nuclear Powerhouse

Identify different forms of energy.
Understand the law of conservation of energy.
Explain ways that energy can be transformed.
Explain how matter can be converted into energy.
Describe the particles that make up atoms.
Describe the nucleus of an atom.
Understand the nuclear forces that hold atoms together.
Trace the nuclear reactions in the solar interior.
Describe the state of equilibrium of the Sun.
Understand the energy balance of the Sun.
Explain how energy moves outward through the Sun.
Describe the structure of the solar interior.
Explain how the Sun pulsates.
Explain what helioseismology is and what it can tell us about the solar interior.
Discuss how studying neutrinos from the Sun has helped understand neutrinos.

Chapter 17 – Analyzing Starlight

Explain the difference between luminosity and apparent brightness.
Understand how astronomers specify brightness with magnitudes.
Compare the relative temperatures of stars based on their colors.
Understand how astronomers use color indexes to measure the temperatures of stars.
Describe how astronomers use spectral classes to characterize stars.
Explain the difference between a star and a brown dwarf.
Understand how astronomers can learn about a star's radius and composition by studying its spectrum.
Explain how astronomers can measure the motion and rotation of a star using the Doppler effect.
Describe the proper motion of a star and how it relates to a star's space velocity.

Chapter 18 – The Stars: A Celestial Census

Explain why the stars visible to the unaided eye are not typical.
Describe the distribution of stellar masses found close to the Sun.
Distinguish the different types of binary star systems.
Understand how we can apply Newton's version of Kepler's third law to derive the sum of star masses in a binary star system.
Apply the relationship between stellar mass and stellar luminosity to determine the physical characteristics of a star.
Describe the methods used to determine star diameters.
Identify the parts of an eclipsing binary star light curve that correspond to the diameters of the individual components.
Identify the physical characteristics of stars that are used to create an H–R diagram and describe how those characteristics vary among groups of stars.
Discuss the physical properties of most stars found at different locations on the H–R diagram, such as radius, and for main sequence stars, mass.

Chapter 19 - Celestial Distances

Understand the importance of defining a standard distance unit.
Explain how the meter was originally defined and how it has changed over time.
Discuss how radar is used to measure distances to the other members of the solar system.
Understand the concept of triangulating distances to distant objects, including stars.
Explain why space-based satellites deliver more precise distances than ground-based methods.
Discuss astronomers' efforts to study the stars closest to the Sun.
Describe how some stars vary their light output and why such stars are important.
Explain the importance of pulsating variable stars, such as cepheids and RR Lyrae-type stars, to our study of the universe.
Understand how spectral types are used to estimate stellar luminosities.
Examine how these techniques are used by astronomers today.

Chapter 20 – Between the Stars: Gas and Dust in Space

Explain how much interstellar matter there is in the Milky Way, and what its typical density is.
Describe how the interstellar medium is divided into gaseous and solid components.
Name the major types of interstellar gas.
Discuss how we can observe each type.
Describe the temperature and other major properties of each type.
Describe how we can detect interstellar dust.
Understand the role and importance of infrared observations in studying dust.
Explain the terms extinction and interstellar reddening.
Define cosmic rays and describe their composition.
Explain why it is hard to study the origin of cosmic rays, and the current leading hypotheses about where they might come from.
Explain how interstellar matter flows into and out of our Galaxy and transforms from one phase to another and understand how star formation and evolution affects the properties of the interstellar

medium.
Explain how the heavy elements and dust grains found in interstellar space got there and describe how dust grains help produce molecules that eventually find their way into planetary systems.
Describe how interstellar matter is arranged around our solar system.
Explain why scientists think that the Sun is located in a hot bubble.

Chapter 21 – The Birth of Stars and the Discovery of Planets

Identify the sometimes-violent processes by which parts of a molecular cloud collapse to produce stars.
Recognize some of the structures seen in images of molecular clouds like the one in Orion.
Explain how the environment of a molecular cloud enables the formation of stars.
Describe how advancing waves of star formation cause a molecular cloud to evolve.
Determine the age of a protostar using an H–R diagram and the protostar's luminosity and temperature.
Explain the interplay between gravity and pressure, and how the contracting protostar changes its position in the H–R diagram as a result.
Trace the evolution of dust surrounding a protostar, leading to the development of rocky planets and gas giants.
Estimate the timescale for growth of planets using observations of the disks surrounding young stars.
Evaluate evidence for planets around forming stars based on the structures seen in images of the circumstellar dust disks.
Describe the orbital motion of planets in our solar system using Kepler's laws.
Compare the indirect and direct observational techniques for exoplanet detection.
Explain what we have learned from our discovery of exoplanets.
Identify which kind of exoplanets appear to be the most common in the Galaxy.
Discuss the kinds of planetary systems we are finding around other stars.
Explain how exoplanet discoveries have revised our understanding of planet formation.
Discuss how planetary systems quite different from our solar system might have come about.

Chapter 22 – Stars from Adolescence to Old Age

Explain the zero-age main sequence.
Describe what happens to main-sequence stars of various masses as they exhaust their hydrogen supply.
Explain how star clusters help us understand the stages of stellar evolution.
List the different types of star clusters and describe how they differ in number of stars, structure, and age.
Explain why the chemical composition of globular clusters is different from that of open clusters.
Explain how the H–R diagram of a star cluster can be related to the cluster's age and the stages of evolution of its stellar members.
Describe how the main-sequence turnoff of a cluster reveals its age.
Explain what happens in a star's core when all the hydrogen has been used up.
Define "planetary nebulae" and discuss their origin.
Discuss the creation of new chemical elements during the late stages of stellar evolution.
Explain how and why massive stars evolve much more rapidly than lower-mass stars like our Sun.
Discuss the origin of the elements heavier than carbon within stars.

Chapter 23 – The Death of Stars

Describe the physical characteristics of degenerate matter and explain how the mass and radius of degenerate stars are related.
Plot the future evolution of a white dwarf and show how its observable features will change over time.
Distinguish which stars will become white dwarfs.
Describe the interior of a massive star before a supernova.
Explain the steps of a core collapse and explosion.
List the hazards associated with nearby supernovae.
Describe the observed features of SN 1987A both before and after the supernova.
Explain how observations of various parts of the SN 1987A event helped confirm theories about supernovae.
Explain the research method that led to the discovery of neutron stars, located hundreds or thousands of light-years away.
Describe the features of a neutron star that allow it to be detected as a pulsar.
List the observational evidence that links pulsars and neutron stars to supernovae.
Describe the kind of binary star system that leads to a nova event.
Describe the type of binary star system that leads to a type Ia supernovae event.
Indicate how type Ia supernovae differ from type II supernovae.
Give a brief history of how gamma-ray bursts were discovered and what instruments made the discovery possible.
Explain why astronomers think that gamma-ray bursts beam their energy rather than radiating uniformly in all directions.
Describe how the radiation from a gamma-ray burst and its afterglow is produced.
Explain how short-duration gamma-ray bursts differ from longer ones and describe the process that makes short-duration gamma-ray bursts.
Explain why gamma-ray bursts may help us understand the early universe.

Chapter 24 - Black Holes and Curved Spacetime

Discuss some of the key ideas of the theory of general relativity.
Recognize that one's experiences of gravity and acceleration are interchangeable and indistinguishable.
Distinguish between Newtonian ideas of gravity and Einsteinian ideas of gravity.
Recognize why the theory of general relativity is necessary for understanding the nature of black holes.
Describe Einstein's view of gravity as the warping of spacetime in the presence of massive objects.
Understand that Newton's concept of the gravitational force between two massive objects and Einstein's concept of warped spacetime are different explanations for the same observed accelerations of one massive object in the presence of another massive object.
Describe unusual motion of Mercury around the Sun and explain how general relativity explains the observed behavior.
Provide examples of evidence for light rays being bent by massive objects, as predicted by general relativity's theory about the warping of spacetime.
Describe how Einsteinian gravity slows clocks and can decrease a light wave's frequency of oscillation.
Recognize that the gravitational decrease in a light wave's frequency is compensated by an increase in the light wave's wavelength—the so-called gravitational redshift—so that the light continues to travel at constant speed.

Explain the event horizon surrounding a black hole.
Discuss why the popular notion of black holes as great sucking monsters that can ingest material at great distances from them is erroneous.
Use the concept of warped spacetime near a black hole to track what happens to any object that might fall into a black hole.
Recognize why the concept of a singularity—with its infinite density and zero volume—presents major challenges to our understanding of matter.
Describe what to look for when seeking and confirming the presence of a stellar black hole.
Explain how a black hole is inherently black yet can be associated with luminous matter.
Differentiate between stellar black holes and the black holes in the centers of galaxies.
Describe what a gravitational wave is, what can produce it, and how fast it propagates.
Understand the basic mechanisms used to detect gravitational waves.

Chapter 25 – The Milky Way Galaxy

Explain why William and Caroline Herschel concluded that the Milky Way has a flattened structure centered on the Sun and solar system.
Describe the challenges of determining the Galaxy's structure from our vantage point within it.
Identify the main components of the Galaxy.
Describe the structure of the Milky Way Galaxy and how astronomers discovered it.
Compare theoretical models for the formation of spiral arms in disk galaxies.
Describe historical attempts to determine the mass of the Galaxy.
Interpret the observed rotation curve of our Galaxy to suggest the presence of dark matter whose distribution extends well beyond the Sun's orbit.
Describe the radio and X-ray observations that indicate energetic phenomena are occurring at the galactic center.
Explain what has been revealed by high-resolution near-infrared imaging of the galactic center.
Discuss how these near-infrared images, when combined with Kepler's third law of motion, can be used to derive the mass of the central gravitating object.
Distinguish between population I and population II stars according to their locations, motions, heavy-element abundances, and ages.
Explain why the oldest stars in the Galaxy are poor in elements heavier than hydrogen and helium, while stars like the Sun and even younger stars are typically richer in these heavy elements.
Describe the roles played by the collapse of a single cloud and mergers with other galaxies in building the Milky Way Galaxy we see today.
Provide examples of globular clusters and satellite galaxies affected by the Milky Way's strong gravity.

Chapter 26 – Galaxies

Describe the discoveries that confirmed the existence of galaxies that lie far beyond the Milky Way Galaxy.
Explain why galaxies used to be called nebulae and why we don't include them in that category anymore.
Describe the properties and features of elliptical, spiral, and irregular galaxies.
Explain what may cause a galaxy's appearance to change over time.
Describe the methods through which astronomers can estimate the mass of a galaxy.
Characterize each type of galaxy by its mass-to-light ratio.

Describe the use of variable stars to estimate distances to galaxies.
Explain how standard bulbs and the Tully-Fisher relation can be used to estimate distances to galaxies.
Describe the discovery that galaxies getting farther apart as the universe evolves.
Explain how to use Hubble's law to determine distances to remote galaxies.
Describe models for the nature of an expanding universe.
Explain the variation in Hubble's constant.

Chapter 27 – Active Galaxies, Quasars, and Supermassive Black Holes
Describe how quasars were discovered.
Explain how astronomers determined that quasars are at the distances implied by their redshifts.
Justify the statement that the enormous amount of energy produced by quasars is generated in a very small volume of space.
Describe the characteristics common to all quasars.
Justify the claim that supermassive black holes are the source of the energy emitted by quasars (and AGNs).
Explain how a quasar's energy is produced.
Trace the rise and fall of quasars over cosmic time.
Describe some of the ways in which galaxies and black holes influence each other's growth.
Describe some ways the first black holes may have formed.
Explain why some black holes are not producing quasar emission but rather are quiescent.

Chapter 28 – The Evolution and Distribution of Galaxies
Explain how astronomers use light to learn about distant galaxies long ago.
Discuss the evidence showing that the first stars formed when the universe was less than 10% of its current age.
Describe the major differences observed between galaxies seen in the distant, early universe and galaxies seen in the nearby universe today.
Explain how galaxies grow by merging with other galaxies and by consuming smaller galaxies (for lunch).
Describe the effects that supermassive black holes in the centers of most galaxies have on the fate of their host galaxies.
Explain the cosmological principle and summarize the evidence that it applies on the largest scales of the known universe.
Describe the contents of the Local Group of galaxies.
Distinguish among groups, clusters, and superclusters of galaxies.
Describe the largest structures seen in the universe, including voids.
Explain how astronomers know that the solar system contains very little dark matter.
Summarize the evidence for dark matter in most galaxies.
Explain how we know that galaxy clusters are dominated by dark matter.
Relate the presence of dark matter to the average mass-to-light ratio of huge volumes of space containing many galaxies.
Summarize the main theories attempting to explain how individual galaxies formed.
Explain how tiny "seeds" of dark matter in the early universe grew by gravitational attraction over billions of years into the largest structures observed in the universe: galaxy clusters and superclusters, filaments, and voids.

Chapter 29 – The Big Bang

Describe how we estimate the age of the universe.
Explain how changes in the rate of expansion over time affect estimates of the age of the universe.
Describe the evidence that dark energy exists and that the rate of expansion is currently accelerating.
Describe some independent evidence for the age of the universe that is consistent with the age estimate based on the rate of expansion.
Explain how the rate of expansion of the universe affects its evolution.
Describe four possibilities for the evolution of the universe.
Explain what is expanding when we say that the universe is expanding.
Define critical density and the evidence that matter alone in the universe is much smaller than the critical density.
Describe what the observations say about the likely long-term future of the universe.
Describe what the universe was like during the first few minutes after it began to expand.
Explain how the first new elements were formed during the first few minutes after the Big Bang.
Describe how the contents of the universe change as the temperature of the universe decreases.
Explain why we can observe the afterglow of the hot, early universe.
Discuss the properties of this afterglow as we see it today, including its average temperature and the size of its temperature fluctuations.
Describe open, flat, and curved universes and explain which type of universe is supported by observations.
Summarize our current knowledge of the basic properties of the universe including its age and contents.
Specify what fraction of the density of the universe is contributed by stars and galaxies and how much ordinary matter (such as hydrogen, helium, and other elements we are familiar with here on Earth) makes up the overall density.
Describe how ideas about the contents of the universe have changed over the last 50 years.
Explain why it is so difficult to determine what dark matter really is.
Explain why dark matter helped galaxies form quickly in the early universe.
Summarize the evolution of the universe from the time the CMB was emitted to the present day.
Describe two important properties of the universe that the simple Big Bang model cannot explain.
Explain why these two characteristics of the universe can be accounted for if there was a period of rapid expansion (inflation) of the universe just after the Big Bang.
Name the four forces that control all physical processes in the universe.
Name some properties of the universe that, if different, would have precluded the development of humans.

Chapter 30 – Life in the Universe

Describe the chemical and environmental conditions that make Earth hospitable to life.
Discuss the assumption underlying the Copernican principle and outline its implications for modern-day astronomers.
Understand the questions underlying the Fermi paradox.
Describe the chemical building blocks required for life.
Describe the molecular systems and processes driving the origin and evolution of life.
Describe the characteristics of a habitable environment.
Describe some of the extreme conditions on Earth and explain how certain organisms have adapted to these conditions.
Outline what we have learned from exploration of the environment on Mars.

Identify where in the solar system life is most likely sustainable and why.
Describe some key missions and their findings in our search for life beyond our solar system.
Explain the use of biomarkers in the search for evidence of life beyond our solar system.
Explain why spaceships from extraterrestrial civilizations are unlikely to have visited us.
List efforts by humankind to communicate with other civilizations via messages on spacecraft.
Understand the various SETI programs scientists are undertaking.

Students – please refer to the Instructor's Course Information sheet for specific information on assessments and due dates.

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*

Students' performance will be assessed, and the weight associated with the various measures/artifacts are listed below.

EVALUATION*

Lecture	75%
Lab	25%
Total	100%

Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.

GRADING SYSTEM:

Please note the College adheres to a 10 point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop. You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of 80 percent (80%) of their classes in order to receive credit for any course. Due to the varied nature of courses taught at the college, some faculty may require up to 90 percent (90%) attendance. Pursuant to 34 Code of Federal Regulations 228.22 - Return to Title IV Funds, once a

student has missed over 20% of the course or has missed two (2) consecutive weeks, the faculty is obligated to withdraw the student and a student may not be permitted to reenroll. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, and if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Science Department Attendance Policies
For a 15-week course (fall and spring) or a 10-week course (summer), the allowed number of absences for a MW or TR class is as follows: 4 absences are allowed for lecture and 2 are allowed for lab, regardless of reason. For a lecture class that meets once a week, the allowed number of absences is 2.

For a 7-week fast-paced course (fall and spring) or a 5-week fast-paced course (summer), the allowed number of absences is as follows: 1 absence is allowed for lecture and 1 for lab, regardless of reason.

When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF. Remember, an absence is an absence, no matter if it is excused or not!

Online/Hybrid Attendance:
Students enrolled in distance learning courses (hybrid and online) are required to maintain contact with the instructor on a regular basis to be counted as "in attendance" for the course. All distance learning students must participate weekly in an Attendance activity in order to demonstrate course participation. Students showing no activity in the course for two weeks (these weeks do not need to be consecutive) will be withdrawn due to lack of attendance.

Lab Attendance for Hybrid Courses:
Students in hybrid classes in which labs meet weekly, are allowed two (2) lab absences. Students in hybrid labs that only meet 5 or 6 times during the semester, must attend all lab sessions for its entirety. When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF.

Part V: Student Resources

THE STUDENT SUCCESS AND TUTORING CENTER (SSTC):

The SSTC offers to all students the following **free** resources:

1. **Academic tutors** for most subject areas, **Writing Center support**, and **college success skills**.

2. Online **tutoring** and academic support resources.
3. Professional and interpersonal communication **coaching** in the EPIC Labs.

Visit the Student Success & Tutoring Center website for more information. To schedule tutoring, contact the SSTC at sstc@hgtc.edu or self-schedule in the Penji iOS/Android app or at www.penjiapp.com. Email sstc@hgtc.edu or call SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455, or go to the Online Resource Center to access on-demand resources.

STUDENT INFORMATION CENTER: TECH Central

TECH Central offers to all students the following free resources:

1. **Getting around HGTC**: General information and guidance for enrollment, financial aid, registration, and payment plan support!
2. Use the Online Resource Center (ORC) including Office 365 support, password resets, and username information.
3. **In-person workshops, online tutorials and more services** are available in Desire2Learn, Student Portal, Degree Works, and Office 365.
4. **Chat with our staff on TECH Talk**, our live chat service. TECH Talk can be accessed on the student portal and on TECH Central's website, or by texting questions to (843) 375-8552.

Visit the Tech Central website for more information. Live Chat and Center locations are posted on the website. Or please call (843) 349 – TECH (8324), Option #1.

HGTC LIBRARY:

Each campus location has a library where HGTC students, faculty, and staff may check out materials with their HGTC ID. All three HGTC campus libraries are equipped with computers to support academic research and related schoolwork; printing is available as well. Visit the Library website for more information or call (843) 349-5268.

STUDENT TESTING:

Testing in an **online/hybrid** course and in **make-up exam** situations may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms (which may have a fee associated with the usage)

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through our online proctoring service. To find out more about proctoring services, please visit the Online Testing section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

DISABILITY SERVICES:

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to HGTC's Accessibility and Disability Service webpage. The Accessibility and Disability staff will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

STATEMENT OF EQUAL OPPORTUNITY/NON-DISCRIMINATION STATEMENT:

Horry-Georgetown Technical College prohibits discrimination and harassment, including sexual harassment and abuse, on the basis of race, color, sex, national or ethnic origin, age, religion, disability, marital or family status, veteran status, political ideas, sexual orientation, gender identity, or pregnancy, childbirth, or related medical conditions, including, but not limited to, lactation in educational programs and/or activities.

TITLE IX REQUIREMENTS:

All students (as well as other persons) at Horry-Georgetown Technical College are protected by Title IX—regardless of their sex, sexual orientation, gender identity, part- or full-time status, disability, race, or national origin—in all aspects of educational programs and activities. Any student, or other member of the college community, who believes that he/she is or has been a victim of sexual harassment or sexual violence may file a report with the college's Chief Student Services Officer, campus law enforcement, or with the college's Title IX Coordinator or designee.

> *Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

INQUIRIES REGARDING THE NON-DISCRIMINATION/TITLE IX POLICIES:

Student and prospective student inquiries concerning Section 504, Title II, Title VII, and Title IX and their application to the College or any student decision may be directed to the Vice President for Student Affairs.

Dr. Melissa Batten, VP Student Affairs
Title IX, Section 504, and Title II Coordinator

Building 1100, Room 107A, Conway Campus
PO Box 261966, Conway, SC 29528-6066
843-349-5228
Melissa.Batten@hgtc.edu

Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Vice President for Human Resources.

Jacquelyne Snyder, VP Human Resources
Affirmative Action/Equal Opportunity Officer and Title IX Coordinator
Building 200, Room 205B, Conway Campus
PO Box 261966, Conway, SC 29528-6066
843-349-5212
Jacquelyne.Snyder@hgtc.edu